

Widener of No. 2930

A M E R I C A N

RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

ASSISTANT EDITORS:

JAMES T. HODGE, *For Mining and Metallurgy.*

CHARLES T. JAMES, *For Manufactures and the Mechanic Arts.*

M. BUTT HEWSON, *For Civil Engineering.*

SATURDAY, AUGUST 17, 1850.

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NEW-YORK:

PUBLISHED WEEKLY, BY

JOHN H. SCHULTZ & CO.

Room 12, Third Floor,

No. 136 Nassau Street.

FOR THE MECHANICAL
METALLIC AND RUBBER SPRINGS
AMERICAN

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JAMES T. HENRY, for Marine and Navigation;
CHARLES T. HENRY, for Commerce and the West; and
W. H. HENRY, for Mining and Manufactures.

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ESTABLISHED IN 1827.

NEW-YORK
PUBLISHED WEEKLY BY
JOHN H. SCHULTZ & CO.
Room 15, Third Street,
No. 136 Nassau Street.

IRON BRIDGES, BRIDGE & ROOF BOLTS,
Etc. **STARKS & PRUYN,** of Albany, New York,
having at great expense established a manufactory with
every facility of Machinery for Manufacturing Iron
Bridges, Bridge and Roof Bolts, together with all kinds
of the larger sizes of Screw Bolts, Iron Railings, Steam
Boilers, and every description of Wrought Iron Work,
are prepared to furnish to order, on the shortest notice,
any of the above branches, of the very best of Amer-
ican Refined Iron, and at the lowest rates.

During the past year, S. & P. have furnished several
Iron Bridges for the Erie Canal, Albany Basin, etc.,
—and a large amount of Railroad Bridge Bolts, all of
which have given the most perfect satisfaction.

They are permitted to refer to the following gentle-
men:

Charles Cook,	Canal Commissioners of the State of New York.
Nelson J. Beach, Jacob Hinds,	
Willard Smith, Esq.,	Engineer of the Bridges for the Albany Basin.
Messrs. Stone & Harris,	Railroad Bridge Builders, Springfield, Mass.
Mr. Wm. Howe,	Engineer & Bridge Builder, Utica, N. Y.
Mr. S. Whipple,	

January 1, 1849.

**TO RAILROAD COMPANIES AND BUILD-
ERS OF MARINE AND LOCOMOTIVE
ENGINES AND BOILERS.**

FASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to 1 in calibre and 2 to 12 feet long,
capable of sustaining pressure from 400 to 2500 lbs.
per square inch, with Stop Cocks, T, L, and
other fixtures to suit, fitting together, with screw
joints, suitable for STEAM, WATER, GAS, and for
LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse & E. Corner of Third & Walnut Streets,
PHILADELPHIA.

To Railroad Companies, etc.



The undersigned has at last suc-
ceeded in constructing and securing
by letters patent, a Spring Pad-lock
which is secure, and cannot be
knocked open with a stick, like oth-
er spring locks, and therefore particu-
larly useful for locking Cars, and
Swifches, etc.

Companies that are in want of a
good Pad-lock, can have open samples sent them that
they may examine and judge for themselves, by send-
ing their address to
C. LIEBRICH,
46 South 8th St., Philadelphia.
6m*

November 3, 1849.

Mattewan Machine Works.

THE Mattewan Company have added to their Ma-
chine Works an extensive LOCOMOTIVE ENGINE
department, and are prepared to execute orders for Lo-
comotive Engines of every size and pattern—also Tenders,
Wheels, Axles, and other railroad machinery, to
which they ask the attention of those who wish such
articles, before they purchase elsewhere.

STATIONARY ENGINES, BOILERS, ETC.,
Of any required size or pattern, arranged for driving
Cotton, Woollen, or other Mills, can be had on favorable
terms, and at short notice.

COTTON AND WOOLLEN MACHINERY,
Of every description, embodying all the modern im-
provements, second in quality to none in this or any
other country, made to order.

MILL GEARING,

Of every description, may be had at short notice, as
this company has probably the most extensive assort-
ment of patterns in this line, in any section of the
country, and are constantly adding to them.

TOOLS.

Turning Lathes, Slabbing, Planing, Cutting and
Drilling Machines, of the most approved patterns, to-
gether with all other tools required in machine shops,
may be had at the Mattewan Company's Shops, Fish-
kill Landing, or at 66 Beaver street, New York.

WM. B. LEONARD, Agent.

RAILROAD

India-rubber Springs.

If any Railroad Company or other party desires it,
the NEW ENGLAND CAR COMPANY will furnish
India-rubber Car Springs made in the form of washers,
with metallic plates interposed between the layers, or
in any other form in which they can be made; in all
cases guaranteeing the right to use the same against
any and all other pretended rights or claims whatsoever.

F. M. Ray, 98 Broadway, New York.
E. CRANE, 99 State Street, Boston.
1849.

**MACHINE WORKS OF ROGERS KETCHUM
& GROSVENOR, Patterson, N. J.** The un-
dersigned receive orders for the following articles man-
ufactured by them of the most superior description in
every particular. Their works being extensive, and
the number of hands employed being large, they are
enabled to execute both large and small orders with
promptness and dispatch.

Railroad Work.—Locomotive Steam Engines and
Tenders; Driving and other Locomotive Wheels, Axles
Springs and Flange Tires; Car Wheels of Cast Iron
a variety of patterns and chills; Car Wheels of Cast
Iron with wrought tires; Axles of best American re-
fined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions
and of the most improved patterns, style and work-
manship.

Mill gearing and millwright work generally, hydraulic
and other presses; press screws; callenders; lathes
and tools of all kinds; iron and brass castings of all
descriptions.

ROGERS, KETCHUM & GROSVENOR,
Patterson, N. J. or 74 Broadway, New York.

THE NEWCASTLE MANUFACTURING Co.
continue to furnish at the Works, situated in the
town of Newcastle, Del., Locomotive and other steam
engines, Jack Screws, Wrought Iron Work and Brass
and Iron Castings, of all kinds connected with Steam-
boats, Railroads, etc.; Mill Gearing of every descrip-
tion; Cast Wheels (chilled) of any pattern and size,
with Axles fitted, also with wrought tires, Springs,
Boxes and bolts for Cars; Driving and other wheels
for Locomotives.

The works being on an extensive scale, all orders
will be executed with promptness and despatch. Com-
munications addressed to Mr. William H. Dobbs, Su-
perintendent, will meet with immediate attention.

ANDREW C. GRAY,
President of the Newcastle Manuf. Co.

DEAN, PACKARD & MILLS,

MANUFACTURERS OF ALL KINDS OF

RAILROAD CARS,

SUCH AS

PASSENGER, FREIGHT AND CRANK CARS

— ALSO —

SNOW PLOUGHS AND ENGINE TENDERS
OF VARIOUS KINDS.

CAR WHEELS and AXLES fitted and furnished
at short notice; also, STEEL SPRINGS
of various kinds; and

SHAFTING FOR FACTORIES.

The above may be had at order at our Car Factory

**REUEL DEAN, }
ELIJAH PACKARD, } SPRINGFIELD, MASS.
ISAAC MILLS, } 1948**

Iron Safes.

FIRE and Thief-proof Iron Safes, for Merchants,
Banks and Jewelers use. The subscriber manu-
factures and has constantly on



hand, a large assortment of Iron
Safes, of the most approved con-
struction, which he offers at much
lower rates than any other man-
ufacturer. These Safes are made
of the strongest materials, in the
best manner, and warranted en-
tirely fire proof and free from dampness. Western
merchants and the public generally are invited to call
and examine them at the store of E. Corning & Co.,
sole agents, John Townsend, Esq., or at the manufac-
tory.

Each safe furnished with a thief-detector lock, of the
best construction.
Other makers' Safes repaired, and new Keys and
Locks furnished at the shortest notice.

H. W. COVERT
cor. Steuben and Water sts. Albany
August 24, 1849.

PHILADELPHIA CAR MANUFACTORY,

CORNER SCHUYLKILL 2D AND HAMILTON STS.,
SPRING GARDEN, PHILADELPHIA CO., PA.

Kimball & Gorton,

Having recently constructed the above works, are pre-
pared to construct at short notice all kinds of

RAILROAD CARS, Viz:

Passenger Cars of all classes—Open and Covered
Freight and Express Cars—Coal Cars—Hand Cars &
Trucks of all descriptions.

They are also prepared to furnish Chilled Wheels of
any pattern. Car Wheels & Axles fitted and furnished.
Snow Ploughs and Tenders made to order. Steel and
other Springs always on hand.

All orders will be filled at short notice, and upon as
good terms as any other establishment in the country.

Omnibuses from the Exchange run within one square
of the manufactory every 10 minutes during the day.
Philadelphia, June 16, 1849. 1y25

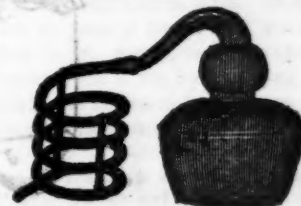
**Patent Self-clinching Rail-
road Spikes.**



These spikes have been in
use upon various roads for sev-
eral years, and have met with
universal approval by Engi-
neers. They drive in the man-
ner shown, turning themselves,
and are therefore not liable to
work loose. They will prove
of great value to secure the
chair.

We are also manufacturing
railroad spikes, hook and flat
head; wrought chairs, clamps,
etc., of superior quality, and
are prepared to contract for any
pattern or weight upon favora-
ble terms.

SMITH & TYSON,
25 South Charles st., Baltimore Md.



P. H. Griffin,

Corner of Steuben and James Sts. Albany, N. Y.
CONTINUES to manufacture copper flues for lo-
comotive boilers, brewers' coppers, stills, tanner
heaters, etc. Copper work in general, at the shortest
notice. He has constantly on hand brass cocks, brass
valves, copper pumps of every variety.
Orders promptly attended to. 1y14

**Patent India Rubber Steam
Packing.**

THIS article, made by the subscriber, who alone is
authorised to make it, is warranted to stand as
high a degree of heat as any that has been or can be
made by any person—and is the article which has made
the reputation of India Rubber Steam Packing and
the demand therefor. A large assortment of all thick-
nesses requisite for any description of engines, steam
pipes, valves, etc., constantly on hand and for sale by
the manufacturer and patentee, who will give every
information regarding its properties, mode of use, etc.
at the warehouse. **JOHN GREACHEN, JR.,**
98 Broadway, opposite Trinity Church.
New York, October, 1849.

Fire Brick.

THE Subscribers have constantly on hand Rufford's
Stourbridge, Oak Farms Stourbridge, Lister, Wort-
ley, Red and White Welsh Fire Bricks, common and
fancy shapes. Also,

ROOFING SLATES,
from the best Welch quarries, and of all sizes. Also
COAL,

of all kinds—Liverpool Orrell and Cannel, Scotch,
New Castle, Picton, Sidney, Cumberland, Virginia,
and all kinds of Anthracite coals. Also,

Pig Iron, Salt, etc., etc., for sale at the lowest market
price. Apply to

SAMUEL THOMPSON & NEPHEW,
275 Pearl and 43 Gold Sts., New York.
November, 23, 1849.



NEW YORK IRON BRIDGE COMPANY.

The Bridges manufactured by this Company having been fully tested on different Railroads, by constant use for more than two years, and found to answer the full expectations of their most sanguine friends, are offered to the public with the utmost confidence as to their great utility over any other Bridge now known.

The plan of this Bridge is to use the iron so as to obtain its greatest longitudinal strength, and at the same time it is so arranged as to secure the combined principles of the Arch, Suspension and Triangle, all under such controlling power as causes each to act in the most perfect and secure manner, and at the same time impart its greatest strength to the whole work.

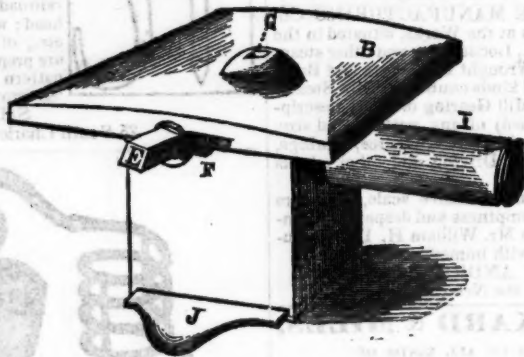
The New York Iron Bridge Company are prepared to furnish large quantities of Iron Bridging for Railroad or other purposes, at short notice, and at moderate prices.

Models, and pamphlets giving full descriptions of the above Bridge, with certificates based on actual trial from undoubted sources, will be found at the office of the Company, 39 Jauncey Court, Wall st., or of W. RIDER & BROTHERS, 19 Nassau Street, where terms of contract will be made known, and where orders are solicited.

August 29, 1849.

M. M. WHITE,
Agent for the Company.

E. Harris' Patent Rotary Blacksmith Tuyere.



LETTERS Patent were issued January 9, 1849, to E. HARRIS, of Springfield, for an Improved Rotary Blacksmith Tuyere. Since that time there have been some hundreds put in operation, giving satisfaction and full proof of superiority over all others.

This Tuyere is so arranged that by one movement it can be changed from the largest work to the smallest; at the same time the fire is changed in proportion, thereby making a great saving in coal. Words cannot convey the full merits of this Tuyere; nor is it deemed necessary to speak in disparagement of other Tuyeres, as every smith is capable of judging for himself, and will give merit where merit is due.

I will simply say that there has not been a single instance where I have had my Tuyere put in use but it has given full satisfaction, and is recommended by all who have used them, as being superior to any other ever introduced. I would invite all to give them a trial; and the names of those using them being given, I hope it may induce others to try them. They recommend themselves.

Western Railroad Shop, Springfield, Mass.

Connecticut val. " Pittsfield, "

Hartford " N. Hampton, "

New Haven " New Haven, Conn.

Norwich and Worcester, Norwich, "

N. York and N. Haven, New Haven, "

Saratoga and Whitehall, Saratoga, N. Y.

Vermont Central, "

Hudson and Berkshire, Hudson, "

L. Kingsley, Canton, Mass.

Hadley Falls Co. Ireland, W. Springfield, Mass.

Sidney Patch, Boston, "

Ames Manuf. Cor., Chicopee, "

American Machine w'ks, Springfield, "

Dean, Packard & Mills, N. Haven, Conn.

G. Frank Bradley, " "

Andrew Baird, " "

Collis & Lawrence, " "

Slate & Brown, Windsor Locks, "

Gage, Nashua, N. H.

Machine shop, Manchester, "

Louis F. Lanney, Baltimore, Md.

J. H. Baerdd, 179 Chambers st. N. Y.

J. Fanning, Rochester, "

G. W. Hunt, 41 Gold st. "

Chamberlain & Waldo, " "

P. S. Burges, carriage maker, " "

Samuel Miller, " "

J. Leggett, Steverson falls, "

J. E. Harris, Hillsdale, "

John L. Graham, Albany, "

David Dalsell, South Egremont, Mass.

Roy & Wilcock, Berlin, Conn.

Agents for the sale of Tuyeres:

B. B. Stevens in New York and Connecticut.

A. J. VanAllen has the Agency for the Western and

Southern States, and is now travelling through those

States. Any communication addressed to the patent-

tee will receive prompt attention.

E. HARRIS, Patentee,

Springfield, Mass.

November 23, 1849.

Railroad Lanterns.

COPPER and Iron Lanterns for Railroad Engines, fitted with heavy silver plated Parabolic Reflectors of the most approved construction, and Solar Argand Lamps; manufactured by

HENRY N. HOOPER & CO.,

No. 24 Commercial St. Boston.

August 16, 1849.

6m33

Gas Fixtures.

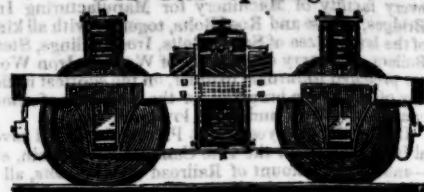
FIXTURES for Burning Gas for Lighting Public Buildings, Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.

HENRY N. HOOPER & CO.

Boston, March 23, 1850.

6m13

F. M. Ray's Patent India-rubber Car Springs.



India-rubber Springs for Railroad Cars were first introduced into use, about two years since, by the inventor. The New England Car Company, now possesses the exclusive right to use, and apply them for this purpose in the United States. It is the only concern that has tested their value by actual experiment, and in all arguments in favor of them, drawn from experience of their use, are in those cases where they have been furnished by this company. It has furnished every spring in use upon the Boston and Worcester road, and, in fact, it has furnished all the springs ever used in this country, with one or two exceptions, where they have been furnished in violation of the rights of this company; and those using them have been legally proceeded against for their use, as will invariably be done in every case of such violation.

The Spring formed by alternate layers of India-rubber discs and metal plates, which Mr. Fuller claims to be his invention, was invented by Mr. Ray in 1844. In proof of which we give the deposition of Osgood Bradley, of the firm of Bradley & Rice, of Worcester, Mass., car manufacturers, and men of the highest respectability. In this deposition, in relation to the right of parties to use these springs, he says:

"I have known Mr. Ray since 1835. In the last of May or the commencement of June, 1844, he was at my establishment, making draft of car trucks. He staid there until about the first of July, and left and went to New York. Was gone some 8 or 10 days, and returned to Worcester. He then on his return said he had a spring that would put iron and steel springs into the shade. Said he would show it to me in a day or two. He showed it to me some two or three days afterwards. It was a block of wood with a hole in it. In the hole he had three pieces of India-rubber, with iron washers between them, such as are used under the nuts of cars. Those were put on to a spindle running through them, which worked in the hole. The model now exhibited is similar to the one shown him by Ray. After the model had been put into a vice, witness said that he might as well make a spring of putty. Ray then said that he meant to use a different kind of rubber, and referred to the use of Goodyear's Metallic Rubber, and that a good spring would grow out of it." There are many other depositions to the same effect.

The history of the invention of these springs, together with these depositions, proving the priority of the invention of Mr. Ray, will be furnished to all interested at their office in New York.

This company is not confined to any particular form in the manufacture of their springs. They have applied them in various ways, and they warrant all they sell.

The above cut represents precisely the manner in which the springs were applied to the cars on the Boston and Worcester road, of which Mr. Hale, President of this road speaks, and to which Mr. Knevit refers in his advertisement. Mr. Hale immediately corrected his mistake in the article quoted by Mr. Knevit, as will be seen by the following from his paper of June 8, 1848. He says:

INDIA-RUBBER SPRINGS FOR RAILROAD CARS.—"In our paper yesterday, we called attention to what promises to be a very useful invention, consisting of the application of a manufacture of India-rubber to the construction of springs for railroad cars. Our object was to aid in making known to the public, what appeared to us the valuable properties of the invention, as they had been exhibited on trial, on one of the passenger cars of the Boston and Worcester railroad. As to the origin of the invention we had no particular knowledge, but we had been informed that it was the same which had been introduced in England, and which had been subsequently patented in this country; and, we were led to suppose that the manufacturers who have so successfully applied this material, in the case to which we referred had become possessed of the right to use that patent. It will be seen from the following communication, addressed to us by a member of the company, by which the Worcester railroad was supplied with the article upon which our remarks were based, that we were in an error, and that the springs here introduced are an American invention, as well as an American manufacture. How far the English invention may differ from it we have had no opportunity of judging."

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SECOND QUARTO SERIES, VOL. VI., No. 33! SATURDAY, AUGUST 17, 1850.

[WHOLE No. 748, VOL. XXIII.]

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American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & Co., 136 NASSAU ST.

Saturday, August 17, 1850.

An Essay on Pen and Pocket Cutlery,
Embracing a Detailed Description of the Mechanical, Chemical, and Manual Operations Performed on Certain Raw Materials, to Convert them into the Means, Implements, and Materials, for Manufacturing Pen and Pocket Knives.

BY A. L. HOLLEY.

CHAPTER IX.—VIEW OF A CUTLERY ESTABLISHMENT TEN YEARS HENCE. SILVER BACK AND OTHER KNIVES. SILVER. TIN. GOLD. COVERING.

Continued from page 500.

Perhaps there is no more showy, brilliant and beautiful work of art in the world, than a fine, well-proportioned, well made knife. In a gold watch, all is yellow metal; a steam engine, though complex, is heavy and large, and usually exhibits the same material, if not an uniformity of color; but a

knife, with the graceful lines of its parts, with its scales reflecting from every point the figure of its richly worked springs, the backs radiant with milled and burnished silver, or gold, the highly polished and massive bolsters, the brilliant shield and rivet heads contrasting with the gold, the jet and the crimson of its shell, the delicacy and the regular concavity of its glittering pen blades, the splendor, the perfect and nicely proportioned figure, and the fine and even edge of the pockets, which seem to be almost unable to restrain themselves from severing everything in their reach; all these are some of the exquisitely beautiful spectacles, which none but a cutler's eye can sufficiently admire, and no one except the cutler and the whittler can fully appreciate. There is almost as much expression in a perfect knife as in a painting or a face. To an experienced eye, every line, every indentation, and every prominence, go to make up and exhibit the character of the article. Fashion and taste, however, have laced up some patterns, till their proportions are distorted, and they are fit for no practical purposes.

Let us now look at some other substances which are used in the manufacture of knives. The middle scales of many jack knives are made from sheet tin, instead of plain sheet iron. Tin, a metal which has long been known, was probably used as early as the time of Moses, and was generally obtained by the ancients from Spain and Britain. It is not abundant in all countries, but is found in Malacca, Chili, Mexico, Galicia, Portugal, Saxony and Bohemia, and in the greatest quantities in Cornwall, England. The most abundant ore of tin is its peroxide, called "tin stone," and the other called "bell metal ore," is the double sulphuret of tin and copper, and is extremely rare. The purest tin is found in grains, in the alluvial soil, and called stream tin, though the ore more generally occurs in veins, and is reduced by grinding, washing and roasting in reverberatory furnaces, then by mixing with charcoal and a flux of limestone.—The heat is kept up from eight to ten hours, which causes some of its impurities to combine with the lime, and to escape in scoria, while the tin is cast in clay moulds. The tin is then fused and runs off, while the heavier part of the drop remains. Wet charcoal is plunged into the tin while in fusion, which causes the remaining impurities to rise to the top. The ores usually contain oxides of iron and manganese. Iron sheets will be covered with

a thin coating of tin, if dipped therein while in fusion, and in this state they are used for knife scales. Tin in its pure state is very white and brilliant, though it is partially tarnished by the action of the atmosphere. It has a slight taste, and smell when rubbed, and its hardness is intermediate between gold and lead. Its ductility and tenacity are inferior to most metals, though it is highly malleable. A tin wire of thirty-seven thousandths of an inch in diameter, will hardly sustain 37 lbs. Its specific gravity is 7.2, its point of fusion 442° Fahr., and its equivalent is 58. Silver, as before shown, is quite extensively used in fine knife making, and is a metal which was known to the ancients, and is found in large quantities in South America, as well as in other countries. It is reduced from its sulphurets, and is found in its native state. It is white, malleable, ductile and tenacious. Its specific gravity is 10.5, and its equivalent 110. Gold is the most valuable and longest known of the metals. Its specific gravity is 19.3, its equivalent 200, and it may be beaten till only one 280 thousandths of an inch in thickness. A grain of gold may be drawn out into a wire 500 feet in length. Gold is always found in a metallic state, either with or without other metals, hence there is no such thing as an ore of gold. Ivory, used extensively for covering, is the material of the tusk of the male elephant. It is less brittle, but more compact, hard and white, and receives a much finer polish than bone. It consists of about 24 per cent. of animal matter, similar to bone, 66 phosphate, and some traces of carbonate of lime. India and Ceylon produce the greatest quantities of ivory, though this is considered inferior to that of Africa in closeness of texture and in color. Yellow ivory is used only for the most common purposes, while that which is slightly blue is highly valuable. The average weight of tusks is about 60 lbs., tho' "scrap ivory" which comb and table knife makers leave, is generally used for pen and pocket knives.

No European or American artist has as yet succeeded in cutting and working ivory as well as the Chinese, though ivory articles are more successfully manufactured at Dieppe than at any other European town.

Mother of pearl, a substance extensively used, and highly valued as covering, consists of the shells which surround pearls, and are composed of the carbonate of lime. They are found on the coasts of Ceylon, Coromandel, and the Bahrein islands, in

the Gulf of Persia, the West Indies, and in the South sea. They are excessively hard, and cannot be softened, therefore work very hard, and are very liable to crack. Cutlers receive an additional price for working pearl, and converting it into knife handles, on this account. Stag horns are much used for covering, and are preferred by many to smooth handles. These horns are used by the stag as weapons, are called antlers, consist of bone, and during formation are surrounded with a hairy and vascular covering, which when the horn is fully grown cracks and is rubbed off by the animal. Scales for knife handles are cut from the outside of the horns, and polished by a brush. They can be made straight by bending them while hot. Buffalo horns are used for similar purposes, and are either jet black, or variegated with grey and white. They are sawn into straight strips of proper size when sufficiently solid and thick, but when otherwise they are pressed into shape while heated. Ox horns are occasionally converted into the scales for cheap knives, either by pressing them in moulds till they are properly shaped, or by sawing them into straight flat strips. They are sometimes transparent, and are placed over printed verses and mottoes, or gold leaf. "Horn partakes of the chemical nature of the cartilaginous part of the bone," and consists chiefly of albumen with some phosphate of lime and a little gelatine. German silver, brass, iron, live oak, and some West Indian and South American woods are also much in use for knife handles, and any wood can be used, provided it is sufficiently hard and compact to receive a rotten-stone polish.

To be continued.

Rights of Patentees.

Circuit Court of the United States for the Northern District of New York. July Term, 1850. Before his Honor Judge Conklin.

Peter A. Burden vs. Erastus Corning and John F. Winslow.—This was an action brought for the violation by the defendants of patent granted to Henry Burden, of Troy, on the 10th of December, 1840. The trial commenced on Monday, the 1st of July, 1850, and closed on Friday of the same week.

The defendants set up three grounds of defence: 1st. That the patent was void for multiplicity of claim.

2d. That it was void for want of novelty.

3d. That the defendants had not infringed.

To sustain the second ground of defence the defendants introduced a patent for a machine for making bullets by pressure, granted to Thomas Bruff, in 1813, and proved its use in Washington city in 1811, and also introduced reciprocating and rotary machines for milling the edges of buttons used in Waterbury, Connecticut, as early as 1832, and also reciprocating and rotary machines for milling the edges of coin used in the mint of the United States at Philadelphia as early as 1833.—The Bruff machine rolled bullets of lead between a revolving cylinder and a stationary curved segmental trough, the surface of the trough gradually approaching the surface of the cylinder, and the peripheries of both being grooved.

Upon the objection that the patent was void for multiplicity of claim, the Judge ruled in favor of the plaintiff. Upon the other points raised by the defendants the Court charged the Jury as follows, and under those instructions the Jury rendered a verdict for the plaintiff of \$100:—

1. That the patent is for a new process, mode or method of converting Puddler's balls into blooms by continuous pressure and rotation of the ball between converging surfaces, thereby dispensing with the hammer, alligator jaws and rollers accompanied with manual labor, previously in use to accomplish the same purpose, and that the patent secures to the patentee the exclusive right to construct, use and vend, any machine adapted to accomplish the objects of his invention as above specified by the process, mode or method above mentioned.

2. That the machines for milling buttons, milling coin, and rolling shot, do not show a want of novelty in the invention of the patentee as above specified, because the process used in them, the purpose for which it was used, and the objects accomplished by them were substantially different from those of Burden's patent.

3. That the machine used by the defendants is an infringement on the plaintiff's patent if it converts puddler's balls into blooms by the continuous pressure and rotation of the balls between converging surfaces, although its mechanical construction and action may be different from the machine used by the plaintiff; and under these instructions the Jury, without retiring, rendered a verdict for the plaintiff of \$100. (Which amount was previously agreed on by the counsel for the respective parties, the plaintiff having been the owner of the patent but a few days when the suit was brought.)

The defendant's counsel excepted to the charge of the learned Judge.

H. B. Stanton and Sam'l Stevens, Esqrs., counsel for plaintiff.

D. L. Seymour, Sam'l. Blatchford, C. M. Keller, A. Worden and J. A. Spencer, Esqrs., counsel for defendants.

American Iron Manufacture.

Below we give the memorial of the Pennsylvania Iron Manufacturers to Congress for increase of duty on iron:

MEMORIAL.

To the Senate and House of Representatives of the United States of America, in Congress assembled:

Your memorialists, interested in the manufacture of iron in the State of Pennsylvania, ask leave to offer some considerations and statements suggested by the suffering condition of that industry. We are not unaware of the prejudice which exists in the minds of many against the propriety of the government giving any attention to the grievances of manufactures; neither are we ignorant of the grounds of this feeling.

It is a part of our purpose in this memorial, to lessen, if we cannot wholly remove this prejudice. On a subject of so much importance, involving so many interests, in a country so extended as ours, it is to be expected that honest differences of opinion will exist, and sectional, if not clashing, claims will arise. The manufacturers of this country, whatever may be their troubles, must yield with all their fellow-citizens, to that system of compromise on which all our institutions are adjusted. We cannot ask any legislation for our advantage unless it be, if not equally for the benefit, at least not injurious to the rest of the community. On this ground we are willing to base our present application for relief. We come, without distinction of party, and ask to be heard upon strictly national considerations, that if any enactment is consequent upon our petition, it may be regarded as permanent and not partial legislation. We ask not for relief to-day which may be withdrawn to-morrow; but for a settled policy. We ask to have the wisdom of all interests and all parties applied to the preparation of such a system as will be permitted to stand, subject only to the improvements which experience and time may dictate.

It cannot be questioned, that a large supply of iron is necessary to the rapid progress of any country in all departments of industry and the arts, in civilization and the material well-being of the people. The production of iron in Great Britain is equal to that of all Europe beside; while her consumption is equal to a million and a third of tons, or about 100 lbs. to each individual of her population. Belgium falls little, if any, short of an equal consumption for each inhabitant. Sweden would stand next in order, but that she exports so much of her iron, as to remain far behind Belgium in proportionate consumption. France consumes about 30 lbs. to each person, and of this, about one-tenth is imported. The rest of Europe does not consume 10 lbs. each person, and the remainder of the old world does not reach a consumption of 5 lbs. In this respect, the enterprise and industry of the people of the United States have not permitted

them to remain behind; so that despite of obstacles the most formidable, and the most vacillating legislation, we stand in the front rank of nations as to the consumption of iron. Our consumption is equal to that of Great Britain for each inhabitant; but we import about two-tenths of the quantity consumed. Such is the abundance of raw materials, such the enterprise of our people, such the tendency to employ iron, and so greatly are the facilities for transportation multiplying, that we might with certainty outstrip the world in its production. All that is needed to secure such a result is a steady home market. Pennsylvania now produces as much iron as Great Britain did in 1830; her product was doubled in ten years, under great disadvantages; and in ten years of favoring legislation, it might be doubled again. Pennsylvania now produces as much iron as France; more than Russia and Sweden united; and more than all Germany. Yet, how many States of the Union will, ere long, manufacture as much as Pennsylvania; for there are few in which the raw material do not abound. Our population is destined to increase in a very rapid ratio; under a wise policy, the production of iron would far more than keep pace, until we should be finally as much distinguished for the consumption of iron as we are now for the production of cotton.

The policy of purchasing only in the cheapest market sends not only the people of the United States, but of all the continent of Europe, and, in fact, of all the world, to Great Britain for iron; for there the cost of making is one-half less than here, and in still greater disproportion with most other nations. The difficulty is, that the manufacturers and merchants of that country are not governed by the cost of their production in selling their commodities, but by the extent and urgency of the demand. When there is a demand, the prices is at the highest; when there is not, the world is invited to a cheap market.

If it be objected to such a development of the manufacture of iron, that the cost of production is too great in the United States, and that we ought rather to import that which is purchased cheaper in other countries; the reply may be made that, Great Britain being the only country in which iron is sold at lower rates than here, our demand could only go to that market; that if sound economy requires us to obtain our supply of iron in Great Britain, the same motive would send all other nations to the same market. But our orders alone could not be filled without raising the price, as to preclude all possibility of our obtaining a full supply. If we should order from Great Britain in one year, additionally, half the quantity of iron we now manufacture, prices would go higher than they have been for a century, in England or America. The British iron market is cheap when you refrain from it, not when you press upon it. The cost of manufacturing iron is far from being the only, or even the chief controlling element of the price. The manufacturer and holder of iron in Great Britain are extremely sensitive to a demand for any increased quantity of iron, or to any increased urgency of demand, whether from abroad or for home consumption.

A million of tons of iron—which is the amount of our consumption when the industry of the country is suffering under no depressing causes—would have cost Great Britain, in 1843, at the prices then prevailing, (taking half the amount in pig, and half as bar iron,) £3,500,000 sterling. In 1846, the same quantity would have cost £9,000,000 sterling, at which prices it was more economical to manufacture than to import. These high prices gave an immense impulse to the production of this country, and showed how promptly capital and enterprise combined to overcome an emergency by which the country was threatened with a deficiency of the indispensable article of iron.

Had we even a stipulation, by treaty, on the part of the government of Great Britain, that we should always be furnished with iron in that market at the low rates now current, say a million of tons for \$20,000,000, how could we pay for it? We already import more than we can pay for in exports.

All the shrewdness and enterprise of our merchants are constantly at work to increase our exports; not only is every thing exported that will pay a profit, but every article that will pay a

freight. How absurd to suppose we could pay \$20,000,000 additional for iron. Any attempt to supply ourselves with iron from abroad would, if persevered in, reduce our consumption from 100 lbs. for each person to far less than half that quantity, besides abridging our imports of other articles, and wholly deranging our foreign commerce.

As manufacturers of iron, we freely admit that we enjoy in Pennsylvania, and, we may add, in all the United States, very manifold natural advantages. If we could now boast that exemption from injurious rivalry, enjoyed by the British manufacturers, during the rapid growth of their industry, we could safely promise even greater results than we have witnessed elsewhere. Look for a moment, at the circumstances under which the British manufacture of iron was developed.—There was no surplus of pig iron in any country of Europe, and the article was unknown in European foreign commerce. All that England ever imported was a few thousand tons from the colonies of Pennsylvania, Maryland, and Virginia; and this was finally cut off by our revolution. The English manufacturer of pig iron has no rival, and required no protection. The only competitors in bar iron were Russia and Sweden; their prices, from 1780 to 1849, ranged from £12 to £25 per ton. But as if this high price was not ample protection to British manufacturers, the government advanced the duties fifteen times, between 1780 and 1820, without one reduction, increasing them from £2 10s to £7 per ton, affording the double protection of high prices, and constantly increasing duties.

Between 1780 and 1825, Russian and Swedish bars could not be imported and sold in England for less than £20 or £100 per ton; this gave the English manufacturers entire possession of the home market for all purposes to which their iron was applicable, and yet their price was always below the foreign.

In contrast with this, the American maker of bar iron competes with rivals whose average home price is only £8 or \$40 per ton, and who, at present rates of iron in the British markets, and duties here can put their bars in our market at \$40, duty paid. It is true, they lose money by the operation, but they would lose more by selling at home, and thus further depressing the markets in which they must sell three times as much as they export. Thus they preserve their own and ruin the markets of their competitors. During the rise of this manufacture in Great Britain, pig iron was worth in their market over 100 shillings—generally 100 shillings. The American manufacturer encounters pig iron sold in Scotland for years together at from 35 to 45 shillings, and which can be put down in our markets, duty paid, at 60 to 70 shillings.

If we ask relief against such ruinous competition, we derive countenance from the fact, that British manufacturers constantly appealed to the government for protection under the favorable circumstances we have noted. We have seen with what success. The time was not long until, in 1825, the manufacture had attained ample growth and power, it could dispense with all aid, and defy competition. Great Britain had then risen to the rank of the largest consumer of iron in the world.

To be Continued.

English Cotton and Woollen Manufacture.

Below we give from authentic data the following statistics relative to the cotton and woollen manufacture of England:

The Cotton manufacture has its chief seat in Lancashire, and the neighboring shires of the north midland; and the material is imported through Liverpool, where is the market, and the goods are exported by Liverpool, London, and Hull. To show the full working of the cotton manufacture, the returns of 1847, 1848, and 1849, are not sufficient, as those were years of depression.

The import of cotton wool in 1845, which was its height, was 721,979,953 lbs., whereof 626,650,412 lbs from the United States, but 42,916,332 lbs were exported.

The worth of cotton manufacture exported from Great Britain in 1846 was £16,701,632; hosiery, lace, and small wares, £1,016,146; cotton, twist,

and yarn, £161,893,750 lbs., £7,882,048; altogether, £25,599,886, besides cotton mixed with other manufactures.

In 1835, the number of cotton factories in England was 1262, whereof in Lancashire, 715; Cheshire, 116; York West Riding, 126; and most of the others in Derby. The number of persons employed was 182,092, whereof in Lancashire, 122,415; Cheshire, 31,512; West Riding, 10,911; Derbyshire, 10,850. The chief cotton towns are Manchester, Stockport, Hyde, Duckenfield, Oldham, Bolton, and Glossop.

In 1839, the whole number of mills was 1686, and of persons employed, 218,136; four-fifths of the power being supplied by steam, equal to 40,590 horse power. In 1847 there were 1967 mills, and 277,023 persons employed. In 1841, the number of persons employed in cotton manufactures, as given by the census, was about 320,000, of whom more than half were females, and two-thirds above 20 years of age.

This is exclusive of the hosiery manufacture, in which cotton is chiefly used, and in which nearly 50,000 persons were employed in 1841, of whom three-fourths were males. Nottingham is the chief seat of this branch, with Derby, [silk,] and Leicester, [wool.]

Much cotton is worked up into lace and bobbinet. In 1841, about 35,000 were employed in this branch. The seats of these manufactures are in the three midland shires, already named, and in the west of England.

The Woollen manufacture is seated in the West Riding of Yorkshire, and in the west of England; Leeds, Halifax, Bradford, Rochdale, and Huddersfield, are its chief towns. Norwich for crapes, Kidderminster for carpets. The wool is got from home or abroad, through London or Hull, and the goods are shipped from London, Liverpool, or Hull.

In 1845, the import of wool was 76,813,855 lbs. Of this wool much is from Germany; but the quantity from our own settlements yearly becomes more. In 1847, the imports from Australia were 26,056,815 lbs.; from the Cape, 3,477,393 lbs.; and from the East Indies, 3,063,142 lbs., being more than half of the wool brought in that year, which was 62,592,598 lbs. The export of foreign wool in 1847 was 4,809,725 lbs.; and of English wool, 5,550,690 lbs., mostly to Belgium and France.—Little wool is sent abroad from Scotland, Wales, or Ireland.

The worth of woollens exported was, in 1847, £6,896,038 [United States, £2,277,732.] In 1815, it was £9,381,426; and in 1818, £8,140,767; and in 1849, £8,000,000. There has been a great increase in woollen or worsted stuffs, from 593,308 pieces, in 1815, to 2,492,217, in 1844; and of woollens mixed with cotton, from 926,264 yards, in 1815, to 32,612,854, in 1847. There has been a great falling off in baizes, flannels, kerseymeres, cloths, and duffels.

The export of woollen yarns, in 1847, was 10,065,231 lbs. [Germany and Holland, 6,959,720;] 1849, 12,000,000.

The import of Alpaca and Llama wool is increasing; in 1849 it was 600 tons; likewise of Mohair, or Goat's wool, which in 1844 was 1,290,771 lbs.

In 1839, the number of woollen mills in England was 1076, besides 161 in Wales; and of worsted mills, 418. The persons employed in woollen mills in England was 47,040; and in worsted mills, 61,632.

In 1841, the number of persons enumerated in the wool and worsted manufactures was 121,249, besides 35,000 unenumerated. This manufacture is important, because it employs so large a number of males above 20 years of age—no less than 86,000.

Railroad Law.

Interesting Railroad Case.—We copy from the Greenfield Gazette and Courier the following notice of a Justice trial, in which were involved the rights of Railroad Companies, their Conductors acting under their regulations, and of the passengers in their cars:—

George Burroughs, a Conductor on the Connecticut River Railroad, was arrested and examined before David Aiken, Esq., on Saturday, for assault and battery in putting Charles Day, of this town,

out of the cars, a few days since, just north of this town. It appeared that Mr. Day purchased a ticket for himself and lady from Greenfield to Vernon, and a few minutes after leaving the Greenfield depot, the Conductor, Mr. Burroughs, came to him and asked him if he had a ticket, and also to see it; and then demanded it. Mr. Day supposed Mr. Burroughs was not the conductor, and refused to give up the ticket. After asking Mr. Day for it three or four times, and Mr. Day as many times refusing, Mr. Burroughs stopped the train and put Mr. Day off, but not, as Mr. Day testified, until he had offered him the ticket on finding that he was really the conductor. The Corporation for Mr. Burroughs, contended that Mr. Burroughs was only following out the Corporation, in regard to the collection of tickets, and that if Mr. Day refused when called for, Mr. Burroughs had a right to put him off the train.

Justice Aiken decided that the rules of the Company were wholesome ones, and that according to the evidence, Mr. Burroughs had committed no assault on Mr. Day by ejecting him from the cars. Mr. Burroughs was discharged.

Cast Iron.

A series of experiments were made by George Rennie, Esq., F.R.S., &c., on the changes of ordinary temperature, particularly on the rise of the arches on Southwark Bridge, having three rows of arches in length, containing about 5,560 tons of iron, from which it appears that the rise of an arch, whose span is 246 feet, and versed sine 23 feet 1 inch, is about one-fortieth of an inch for each degree of Fahrenheit, making 14 inch for a difference of 50°. In Mr. Rennie's opinion, there is no more danger to the stability of iron bridges from the effects of expansion and contraction than to those of stone, for the abutments being firmly fixed, the arches must necessarily rise or fall.

Earth's Early Inhabitants.

It is strange that, in a thin bed of fine clay, occurring between two masses of sandstone, we should thus have convincing but unexpected evidence preserved concerning some of the earth's inhabitants at this early period. The ripple mark, the worm track, the scratchings of a small crab on the sand, and even the impression of the raindrop, distinct as to indicate the direction of the wind at the time of the shower; these, and the footprints of the bird and the reptile, are all stereotyped, and offer an evidence which no argument can gainsay, no prejudice resist, concerning the natural history of a very ancient period of the earth's history. But the waves that made that ripple mark have long ceased to wash those shores; for ages has the surface then exposed been concealed under great thickness of strata; the worm and the crab have left no solid fragment to speak to their form or structure; the bird has left no bone that has yet been discovered; the fragments of the reptile are small, imperfect, and extremely rare. Still enough is known to determine the fact, and that fact is the more interesting and valuable from the very circumstances under which it is presented.—*Ansled's Picturesque Sketches of Creation.*

New Mining Machinery.

During the past fortnight several gentlemen from Cornwall, and others connected with the mining interests, have visited the factory of Messrs. Donkin & Co., engineers, to witness a series of experiments on a new pump, designed for raising water from mines or other deep levels, by direct action, without the intervention of either main rods, buckets, plungers or valves. The machine used on the occasion for showing the action of the pump was a 1-horse power Bishop's improved disc engine, which possesses the extraordinary character of being applied either as a steam engine to drive machinery, or being driven by other machinery, to form a pump; it consists of a short cylinder [in this case 8 in. diameter], placed longitudinally, in which a disc with a projecting arm vibrates with a rolling motion. It was actuated by a steam engine of similar form; but water, wind, or horse power would do equally as well to show the same result. On the disc being set in motion, an immediate vacuum is formed at the induction port, to which the wildbore or suction pipe is securely fixed; the water now rushes up, and fills the space between the cylinder

and disc, which continues until the disc is opposite the delivery port, when the contents of the cylinder is forced out of the delivery port up the column, at the same instant the vacuum is forming on the opposite side, and a fresh supply is following that which is being delivered; thus, the only suspension from continual action is the instant of time the disc occupies in passing the ports, which, in consequence of the rapidity of motion, does not cause the least intermission of the passing current. The column here used was a 2-inch pipe, about 40 feet high; the water was ejected in a solid continuous stream, with the greatest ease, at a velocity of 24 feet per second, and very much to the admiration of every one present. A small wooden model in sections was then shown the visitors, whereby all its working parts were explained; it is extremely simple, and does not appear in any way subject to derangement. A large pump on this system is in daily use draining a marsh in Yorkshire, throwing a continuous stream of 10 tons of water per minute; and one on a scale sufficiently large to raise 400 gallons per minute from a mine in Cornwall, 100 fathoms deep, is in progress; the assumed estimate of its duty is 110,000,000, or 34 lbs. of coal per horse power.—*Mining Journal*.

History of the First Steamship that ever Crossed the Atlantic.

The American steamship Savannah, built by Croker & Fickett, at Corlear's Hook, in this city, is universally conceded the honor of being the first steam-propelled vessel that ever crossed the Atlantic ocean. From the memory of one of those who formed her crew, (Mr. A. Thomas, then fireman,) and believed to be, with one exception, the only survivor, we are enabled to give a succinct narrative of her voyage. According to his understanding of the facts, she was built by a company of gentlemen, with a view of selling her to the Emperor of Russia. This company was organized through the agency of Capt. Moses Rogers, afterwards her commander. The Savannah was a vessel of 380 tons, ship-rigged, and was furnished with a horizontal engine. This was placed between decks—boilers in the lower hold.

The Savannah sailed from New York "in the second year of the Presidency of James Monroe," to use the words of our informant, or in the year 1819. She first went to Savannah. From Savannah, she proceeded direct to Liverpool, where she arrived after a passage of 18 days, during seven days of which she was under steam.

When about entering St. George's channel, off the city of Cork, she was descried by the commander of the British fleet, then lying at that city. Seeing a huge mass of smoke ascending from the vessel, enveloping her rigging, and overshadowing the sky, he naturally inferred that a vessel was on fire, and in distress, and with commendable promptitude despatched two cutters to her relief. After passing near her a few times, taking a full survey, and firing a few guns across her stern, the steamer was boarded. Finally, being perfectly satisfied that all was right, the cutters bore away.

The news of her approach having been telegraphed to Liverpool, as she drew near the city, with her sails furled and the American colors flying, the pier-heads were thronged by many thousand persons, who greeted her with the most enthusiastic cheers. Before she came to anchor, the decks was so crowded that it was with difficulty the men could move from one part to another, in the performance of their duty. She was afterwards visited by many persons of distinction, and departed for Elsinore, on her way to St. Petersburg. She next touched at Copenhagen, where she remained two weeks. During her stay, Mr. Hughes, the American Consul, went out in her on a pleasure excursion fourteen miles, accompanied by the king, and other noted personages. From Copenhagen she went to Constadt and St. Petersburg. Not being able to get over the bar at the latter place, she lay opposite the city, six miles distant. Here, too, she was visited by the American Consul, Mr. Campbell, and the Emperor.

Here, as at other places, she was an object of much wonderment. She, however, was not sold, as had been expected, and sailed for home, putting into Elrington, on the coast of Norway, on the passage. From the latter place, she was 23 days

in reaching Savannah. On account of the high price of fuel, she carried no steam on the return passage, and the wheels were taken off. A similar course was adopted during a portion of the time occupied by the passage out from the United States. As it was nearly or quite impossible to carry sufficient fuel for the voyage, during pleasant weather, the wheels were removed, and canvas substituted. On nearing Liverpool, the more effectually to "astonish the natives," the wheels were restored. At the completion of the voyage, the Savannah was purchased by Capt. Nathaniel Moldrege, divested of her steam apparatus, and used as a packet between Savannah and New York. She subsequently went ashore on Long Island, and broke up.

Although Capt. Rodgers was offered \$100,000 for her by the King of Sweden, to be paid in hemp and iron, delivered in New York, Philadelphia and Boston, the offer was not accepted—the cash being wanted. It is said that \$50,000 or \$60,000 was sunk in this transaction.

Captain Rodgers, the commander of the Savannah, died a few years ago on the Pee Dee River, North Carolina. He is believed to be the first man that ran a steamboat either to Philadelphia or Baltimore. The mate was named Stephen Rodgers, and now resides at New London, Ct.

Apropos to this subject, we quote from an old file of papers, the following paragraph, which appeared at the time of the arrival of the British steamship Sirius, in 1838:—

"The practicability of the undertaking (navigating the ocean with steam) was, in fact, already proved by American skill; the question now to be settled is, its economy, and its superiority to the usual mode of navigating; and this, we admit, will be due to British enterprise."

Heavy Masses of Copper.

We have seen passing our office for a week past immense masses of native copper, of such weight as to require two teams to a wagon; and we take from Mr. McKnight's Shipping Books the weight of a few masses from the Cliff and Minesota mines.

The following are from the Cliff:—4,470; 4,600; 4,096; 4,000; 4,286; 4,200; 4,300; whole weight, 29,852.

Every piece, it will be noticed, weighs two tons or more and many of them are cut from masses weighing many tons.

The copper is too tenacious and compact to be broken in pieces by blasting and it has to be cut up with a long chisel, three-fourths of an inch in width, by chipping off piece after piece with a heavy hammer. By this slow and expensive process these large masses of native copper are cut up into pieces for shipment. An inventor of some machine for sawing or cutting this copper by steam power, would strike a vein of good fortune.

The Minesota mine is turning out masses of the same description and of the same great weights. Here are four pieces lately sent down:—4,726; 4,050; 3,400; 2,465; whole weight, 14,641.

The schooner Spartan, Capt. Fuller, cleared at this port on the 10th ult. with 56 masses of copper, which weighed 57 1674-2000 tons, of which 13 weighed under 700 lbs. And the docks here, and at the mines are filled full of masses of the same enormous size. And all these constantly increasing shipments of this metal have to be carted across the portage, and shipped again, after being lifted on and off from carts and handled over four times, attended with great expense and delay, and all for want of a canal three-fourths of a mile.—*Lake Superior Journal*.

Wabash Canal.

We have taken some pains to ascertain the progress now being made in the construction of the Evansville division of the Wabash and Erie Canal. We had the pleasure about the first of June, of announcing that an important division of forty-two miles, between Terre Haute and Point Commerce, had been completed and the water let into it. We have now a continuous canal—the whole line is in fine navigable order—from Toledo to Point Commerce, Indiana, a distance of three hundred and fifty-two miles. Point Commerce is one hundred and ten miles from Evansville, on the Ohio river, the southern terminus of the Wabash and

Erie Canal—the longest canal in the United States. The southern division from Point Commerce to Evansville, a distance of one hundred and ten miles—is in rapid process of construction.

A division of 17 miles extending to Newbury will be opened by the 1st November next.

Another division of 23 1-2 miles extending to Maysville on the road leading from Louisville to Vincennes will be opened by the fall.

We learn from the Chief Engineer, Jesse L. Williams, Esq., now having charge of the work—finished as well as unfinished portions of the canal—that he intends to pass loaded boats through the whole line from Toledo to Evansville, within two years from this date.—*Toledo Repub.*

A Runaway Locomotive.

On New Year's day, 1850, a catastrophe, which it is fearful to contemplate, was averted by the aid of the telegraph. A collision had occurred to an empty train at Gravesend; and the driver having leaped from his engine, the latter started alone for London. Notice was immediately given by telegraph to London and other stations; and while the line was kept clear, an engine and other arrangements were prepared as a buttress to receive the runaway. The superintendent of the railway also started down the line on an engine, and on passing the runaway he reversed his engine and had it transferred at the next crossing to the up-line, so as to be in the rear of the fugitive; he then started in the chase, and on overtaking the other he ran into it at full speed, and the driver of the engine took possession of the fugitive, and all danger was at an end. Twelve stations were passed in safety; it passed Woolwich at fifteen miles an hour, it was within a couple of miles of London when it was arrested. Had its approach been unknown, the mere money value of the damage it would have caused might have equalled the cost of the whole line of telegraph.

Steamboat Disasters.

The committee appointed by the Cleveland meeting to report on the number of steamboat disasters on the Northern Lakes have reported the following as the result of their investigations, viz:

Lives lost by 79 explosions.....	111
" " 11 fires.....	804
" " 41 collisions.....	62

Total.....977

Nearly all of these disasters have occurred within the last ten years. All this the committee think has been caused by carelessness and recklessness, and they recommend the passage by Congress of stringent regulations in the structure and running of boats, and the appointment of competent inspectors with adequate salaries, to see these regulations enforced.

English Railways.

Railway Traffic.—The gross traffic receipts on railways in the united kingdom during the first 24 weeks of the present year amounted to £5,291,235, being at the rate of £979 per mile. At the corresponding period of 1849, the receipts amounted to £4,664,032, being at the rate of £1020 per mile; of 1848, to £4,136,837, being at the rate of £1127 per mile; of 1847, to £3,654,196, at the rate of £1273 per mile; and at the same period of 1846, to £3,172,950, being at the rate of £1477 per mile. The aggregate length of the railways open over which the traffic was carried at the end of the 24 weeks in 1850, was 5560 miles; in 1849, 4711 miles; in 1848, 3804 miles; in 1847, 3031 miles; and at the end of the period mentioned, in 1846, 2332 miles. The increase in the receipts during the 24 weeks in the present year over those of the corresponding period in 1849, amounted to £627,203; the increase in the receipts during the same period in 1849 over the preceding year was £527,195; in 1848 over 1847, £482,641; and in 1847 over 1846, £481,245. In the mileage, the increase at the end of the 24 weeks in 1850 over the corresponding period of 1849, was 849 miles; in 1849, 907 miles; in 1848 773 miles; and in 1847 the increase of mileage over the end of that period in 1846, was 799 miles. The diminution in the receipts per mile for the 24 weeks, as compared with those of the preceding year, amounted in 1850 to £41; in 1849 to £107; in 1848 to £146; and in 1847 to £304.

making the total diminution of receipts per mile during four years, 1848, or about 34 per cent. It appears from the above that a considerable improvement has taken place in the traffic receipts per mile during the present year, which is attributed, in a great degree, to the comparative falling off in the mileage opened, which, for the present year, shows an increase over the preceding one of only 18 per cent., while in 1847 it amounted to 35.8 per cent. of the mileage open in the preceding year.

Survey of the Cleveland, Norwalk and Toledo Railroad, from Wellington to Toledo.

The party of surveyors engaged in surveying the route of the Cleveland, Norwalk and Toledo railroad, arrived in our city yesterday, having completed the survey from Wellington to this place. We have examined their profile, and it shows an extraordinarily favorable route. The maximum grade on the whole line is 20 feet per mile. There are but six curves (and they very short ones) in the entire distance. Three of these are between Wellington and Bellevue and the Sandusky river, and the last on this side of that river, about a mile from Fremont. From that point to Toledo, the road, as surveyed, will be a perfectly straight line, a distance of 28 to 29 miles.

The Cleveland, Columbus and Cincinnati road is completed to Wellington, a distance of thirty-five miles, and two passenger trains are running between that point and Cleveland daily. Commencing at Wellington, the surveyed line west passes near Brighton and Clarksville, through Norwalk, Monroeville, Bellevue, Hamer's Corners and Fremont, to Toledo, making the entire distance 78 miles. The Charlevent, Black river, Vermillion, East and West Huron, Sandusky and Portage, seven in number, are the principal streams to be crossed. They are all passed within the maximum grade, and most of them with less than that grade. On one portion of the line, including Bellevue, there is a distance of 16 miles where no masonry will be required, except small drain culverts, and very few of them will be necessary. There is excellent and easy drainage all the way.

The survey was made under the direction of F. T. Harbach, Esq., Chief Engineer, by Wm. H. Newton Esq., of this city, and has been prosecuted with a degree of energy which reflects the highest credit upon those gentlemen, and the party engaged in making it. The inhabitants along the line have exhibited the most lively interest in the road—rendering the party all the "aid and comfort," and every attention in their power, and the expenses of the survey have been cheerfully and promptly raised. Every indication has been manifested by the people on the line, of a deep interest on their part in the rapid completion of the road; and there can be no doubt that the several counties are prepared to raise their proportion of the funds necessary for that purpose.

Gold Discovered in the Copper Region.

The editor of the Lake Superior Journal states: We were shown yesterday, by Capt. John Halloran, of this place, a piece of quartz rock, from Lake Superior, containing several dollars worth of pure native gold. The gold shows itself in particles, disseminated through the quartz, the largest of which, as near as we could judge from the appearance, weighs more than a dollar. He states that a friend in the mining country had discovered rocks of this description, of which this is a surface specimen, as its appearance clearly shows it to be; that there was no reason, object, or chance for deception in regard to it. He brought it down in order to have it examined, and we saw it thoroughly tested in several ways, yesterday, and there is no question as to its being genuine gold.

It is not, however, the first discovery of gold on the lake; geologists have detected it in several instances; and the lamented Dr. Houghton was confident that gold would be found in considerable quantities; and it has been supposed, from minutes made by him, and from remarks on the subject, that he knew more about its location than any one else, and even much more than he had ever made known.

We have no disposition to start a golden humbug story here at the north-west—California will

monopolize everything in that line—and we believe our copper and iron mines will be of more permanent and lasting wealth to this section, and to the whole country, than even a rich gold mine on Lake Superior. Still, we shall now expect to see this gold bearing rock tested and analyzed, and the country explored more fully, with a view to further discoveries in this precious metal; and we hope the sanguine expectations of the fortunate discoverer of this gold mine will be fully realized.

New Hampshire Railroad Bonds.—The Legislature of New Hampshire, at its last session, passed the following act:—

Sec. 1. Be it enacted by the Senate and House of Representatives in General Court convened, as follows: No Railroad Company in this State shall be exonerated from the payment of any bond or obligation payable on time, or any part thereof, issued by its directors, in pursuance of authority heretofore given by its stockholders, at a legal meeting of said company, on account of any discount made to the purchaser in disposing of the same.

Sec. 2. This act shall be binding on any Railroad Company—and such only that shall accept the same by a unanimous vote, at a meeting of the stockholders duly called for the purpose.

Sec. 3. This act shall be in force on and after its passage.

Indiana.

From a recent report of the President of this Road, Charles Rose, Esq., to the Directors, we copy the following account of the condition and prospect of this work. He says:—

"The grading of the balance of the road between this place and Indianapolis, was put under contract on the 28th of June, at an average of about two and a half per cent. below the engineer's estimate, and 26½ per cent., payable in the stock of the company; so that the grading and masonry of the whole line, between these points, is now under contract or completed. Considerable more than half of the work is now done, and the balance is progressing rapidly towards completion. All the heavy work will be completed the coming fall; and the whole line will be ready for the superstructure next spring. And if the iron can be obtained, so as to have it brought up the river early next spring, I see nothing to prevent the completion of the road to Indianapolis by the 1st of December, 1850.

The entire loss of the wheat crop last summer has made it very difficult to obtain a further subscription to our stock, or even to collect all that has fallen due on former subscriptions; but as the present crop has never been surpassed, I trust we shall be more successful the present season, and be enabled to meet all our engagements promptly, and pay off the small temporary loan made last season. I have sold \$37,700 of the Company's six per cent. bonds, payable in five years from the 1st of January, 1850. With this exception, we are entirely out of debt, and have a balance in the treasury of \$9,211 67, as will be more fully seen by the Treasurer's report. And should the stockholders meet their payments promptly, and our stock subscription be increased, (as we have every reason to anticipate,) we shall have no difficulty in meeting all our engagements, without resorting to a further loan, until the road is ready for the iron.

The citizens of Illinois, seeing the progress we are making, begin to feel a deep interest in the extension of the road west to the Mississippi. A large amount of stock has been subscribed, and a company will be fully organized, under the general law of the State, the last of this month, with the intention of making a road from the State line opposite this place to St. Louis. Another company has a stock subscription of upwards of \$170,000, intending to make a road from this point to Alton, and expect to locate it in a short time. I understand the citizens of Springfield have it in contemplation to organize a company for the purpose of extending their western road to this place, so as to form a direct line from Quincy, by Springfield, and commencing here with the great Central or Atlantic and Mississippi road.

When we look at the grand project of uniting the East with the great and growing West, by this

central road to the Mississippi, and see the incalculable benefit it must be to the whole country, and the profitable investment it must prove to the stockholders, we ought to redouble our exertions to complete this part of the line as soon as possible, so that we may be able to step forward and aid our friends in the early extension of the lines connected with us.

Rhode Island.

Providence and Worcester Railroad Company.—The bonds of this company, which were issued three years ago, to procure funds for completing the road, matured yesterday, and were promptly met. The amount outstanding was \$424,000.—The funds raised to meet this payment were procured by a re-issue of the bonds of the company for \$400,000, equivalent to a renewal of a like amount of the old bonds. The residue of the amount, (\$24,000) was taken from the net earnings of the road on hand. The new bonds are payable as follows:—\$50,000 in one year; 50,000 in two years; \$300,000 in ten years; and bearing an interest of 6 per cent. per annum. They are all negotiated at par. It is the intention of the board, we learn, to pay off that portion of the bonds becoming due in 1851 and 1852, in amount \$100,000, by applying for that object a similar amount of the net earnings of the road during the years 1851 and 1852.—*Providence Journal.*

Georgia.

The business on the Western and Atlantic Railroad (Ga.) has increased very largely this year.—The passage receipts of last month were one hundred per cent. larger than last year, and the freight gains were very large. The aggregate receipts were \$12,541, against \$7,241 same month of last year. The receipts of the six months ending 30th June were:—

	1849.	1850.
Freight.....	\$48,680	\$66,119
Passengers.....	16,275	29,852
Total.....	\$64,955	\$95,971

Increase in 1850.....\$31,016

The receipts of the Central (Ga.) Railroad show likewise a large gain over July, 1849. The earnings are \$22,525 against \$33,160, an increase of \$10,634, or nearly 50 per cent.

Western and Atlantic Railroad.—The following table shows the earnings of this road for the past six months of the present year compared with the past:—

Months.	Freights.		Passengers.	
	1849.	1850.	1849.	1850.
Jan.....	7,404 84	8,390 21	2,696 74	3,754 47
Feb.....	7,833 52	9,133 93	2,472 98	4,336 14
March...	13,838 39	17,560 48	3,567 48	4,373 10
April...	9,892 14	14,548 66	2,559 22	5,245 20
May...	6,283 97	10,529 18	2,265 24	5,200 16
June...	4,427 56	5,897 38	2,714 28	6,644 08
	48,680 48	66,119 94	16,275 65	29,852 85

Forty-seven and a half per cent.; or a small fraction over forty-seven per cent. increase.

Central Railroad.—The profits of this Road for July over those of July, 1849, were \$10,634 93.

Illinois.

Alton and Terre Haute Railroad.—We understand that the Directors of the Alton and Sangamon railroad company met at Hillsboro on Tuesday last, and made choice of the following gentlemen as their officers, viz: Hon. Cyrus Edwards, of this county, President; John S. Hayward, Esq., of Hillsboro', Treasurer; Capt. O. Adams, of this city, Secretary. They likewise employed Wm. P. Crocker, Esq., to survey the route of the road, who expects to commence operations to day. This gentleman—who is well known for his excellent survey of the route of the Alton and Sangamon railroad, a few years since—has reconnoitered the route of the Alton and Terre Haute railroad as far as twenty-two miles east of Hillsboro', and expressed the opinion that it is entirely free from any serious obstacle, and even more eligible than the former route.—*Alton Telegraph, 5th ult.*

A DETAILED STATEMENT OF ALL THE CHARCOAL COLD BLAST FURNACES IN WESTERN PENNSYLVANIA IN 1850.

County.	Sold by Sheriff date.	Furnace.		Name of works.	Situation, P.O.	Owners.	Kind of ore used.	Largest product.		No. of persons employed.	No. of horses, etc. employed.	No. of tuyeres.	Stack.		Kind of power used and No.	Kind of metal made and No.	Capacity. Tons.
		In blast.	Out of blast.					Tons.	Actual make 1849.				Feet high.	Feet deep.			
Armstrong,	11 1849 S	1	1	1847 Rock,	Apollo,	A. Woodward,	H C	600	600	60	48	18	30	18	Steam	3	1100
		1	1	1846 Buffalo,	Worthington,	P. Graff & co.	C	300	300	40	20	28	32	28	S&W	3	1100
	1850 F	1	1	1842 Red Bank,	Red Bank,	Reynolds & Ritchie,	"	1900	1900	100	70	29	32	32	Steam	3	1900
		1	1	1847 Olney,	Kittanning,	McCrea & Galbraith,	"	800	800	60	48	18	30	18	Water	3	1100
		1	1	1845 Mahoning,	"	J. A. Caldwell & co.	"	1300	1300	83	52	29			Steam	3	1400
		1	1	1830 Alleghany,	"	A. McNickle,	"	600	600	45	23	18			Steam	3	1100
		1	1	1846 American,	"	Jamison & Ledlie,	"	700	700	57	38	28	6		"	3	1350
	1845 F	1	1	1845 Ore Hill,	"	W. & R. McCutcheon & co.	"	1610	1610	108	80	28			Water	3	1610
	1849 F	1	1	1845 Cowanshannack,	"	James E. Brown,	"	600	600	36	34	18			Water	3	1100
	1849 S	1	1	1846 Phoenix,	Glade Run,	G. B. McFarland,	"	1040	1040	75	50	18	30	18	"	3	1100
		1	1	1846 Pine Creek,	Kittanning,	Browns & Mosgrove,	"	1436	1436	65	50	28	43	33	Steam	3	1430
Butler,	6 1843 S	1	1	1846 Marston,	Harrisville,	James Kerr,	"	700	700	40	28	18			Water	2	1100
		1	1	1838 Slippery Rock,	Slippery Rock,	J. McKunkin,	"	850	850	47	26	18			"	3	1100
		1	1	1840 Hickory,	"	Stewart & Sullivan,	"	650	650	50	26	18			Steam	3	1400
		1	1	1843 Maple,	Maple Furnace,	H. Graff,	"	1000	1000	80	60	19	31		"	3	1400
Cambria,	4	1	1	1847 Kensington,	Lawrenceburg,	A. W. Crawford & co.	H C	900	900	100	70	29			"	3	1400
		1	1	1848 Winfield,	Butler,	W. L. Spear,	"	1400	1400	100	70	29			Water	3	1400
		1	1	1845 Mill Creek,	Johnstown,	J. Bell & co.	H	1050	840	80	38	18	30	30	Steam	3	1300
		1	1	1842 Cambria,	"	King & Schoenberger,	"	1300	820	90	45	28	30	30	Water	3	1300
Clarion,	28	1	1	1846 Mount Vernon,	"	Linton & Galbraith & co.	"	1000	1000	90	45	18			Water	3	1100
		1	1	1847 Ashland,	Summit,	Hugh McNeil,	C	800	800	80	40	18			Steam	3	1500
		1	1	1845 Helen,	Clarion,	W. S. Packer & co.	"	1500	1000	100	70	29	32	32	Water	3	1400
		1	1	1828 Clarion,	"	C. Meyers,	"	1400	600	70	45	29	32	32	Water	3	1400
		1	1	1845 Martha,	Shippensburg,	J. Black & co.	"	700	450	50	30	18	6	6	Water	3	1100
		1	1	1844 Mary Ann,	"	King & Maxwell,	"	1200	1200	70	56	18	32	32	S&W	3	1350
		1	1	1832 Shippensburg,	"	Alexander & McLroy,	"	1000	800	65	46	18	32	32	"	3	1100
		1	1	1844 Prospect,	Callansburg,	W. B. Feizer,	"	700	700	60	41	17	6	6	Water	3	1000
	1850 S	1	1	1842 Elk,	Shippensburg,	Patrick Kerr,	"	800	500	60	34	17	6	6	S&W	2	1000
	1849 S	1	1	1844 St. Charles,	Leatherwood,	James Haddon,	"	1000	800	81	48	29			Water	3	1400
		1	1	1844 Deer Creek,	Shippensburg,	Adams & Vernon,	"	900	100	66	36	18			Water	3	1100
		1	1	1844 Black Fox,	Brady's Bend,	Moore & Seymour,	"	950	950	66	40	18	6	6	Water	3	1350
		1	1	1841 Clinton,	Clinton Furnace,	Sigworth & Feizer,	"	650	500	56	36	18			Water	3	1100
		1	1	1845 Licking,	Licking,	C. Fulton,	"	550	400	52	35	17	6	6	"	3	1000
		1	1	1845 Monroe,	Clarion,	J. & J. B. Lyons,	"	900	700	72	38	18			"	3	1100
	1850 S	1	1	1845 Lunestone,	Greenville,	S. F. Plummer,	"	700	316	58	33	18			W&S	3	1100
		1	1	1838 Jefferson,	Jefferson Furnace,	Plummer & Creary,	"	1200	1200	83	58	29			Steam	3	1400
		1	1	1842 Buchanan,	Callansburg,	Lawson, Duff & Orr,	"	1200	830	86	61	29			"	3	1400
		1	1	1845 Pike,	Curlsville,	Reynolds & Cribbs,	"	1000	830	77	53	18	6	6	"	3	1350
	1849 S	1	1	1846 Eagle,	Callansburg,	Miller & Son,	"	850	850	58	47	18			"	3	1100
		1	1	1846 Catfish,	Brady's Bend,	Lyons, Shorb & co.	"	1120	1120	75	48	19	6	6	"	3	1400
		1	1	1845 Sligo,	Clarion,	"	C H	1555	1215	75	40	18	6	6	S&W	3	1560
		1	1	1836 Madison,	"	"	C	1421	75	40	18	6	6	6	Steam	3	1400
		1	1	1835 Beaver,	Shippensburg,	Miller & Long,	"	1210	1050	92	73	19			"	3	1420
	1849 F	1	1	1846 Washington,	Clarion,	Long, Carothers & Co.	"	1420	1420	105	84	29			"	3	1420
		1	1	1847 Mount Pleasant,	Strattonville,	Brown, Phillips & co.	"	830	830	62	45	18	6	6	"	3	1350
	1849 S	1	1	1845 Hemlock,	Clinton,	Horner & Eaton,	"	986	986	69	43	18	6	6	S&W	3	1350
		1	1	1843 Franklin,	Reimersburg,	J. Thompson & co.	"	1025	912	67	56	19			Steam	3	1100
Erie,	1	1	1	1847 Richland,	Emington,	John Keating,	"	1060	1060	70	56	19	30	30	Water	1	1400
		1	1	1842 Erie,	Erie,	Vincent, Himrod & co.	"	800	300	50	17	17	36	36	S&W	2	900
	1847 F	1	1	1796 Fair Chance,	Uniontown,	F. H. Oliphant & Son,	B C	300	300	30	15	17	33	33	Water	2	900
	1848 F	1	1	1820 Coal Spring,	"	McKean & others,	"	1000	400	60	42	18	33	33	S&W	3	1100
Payette,	1849 F	1	1	1835 Wharton,	"	A. Stewart,	"	600	400	50	28	18	33	33	Water	3	1100
	1849 F	1	1	1805 Spring Hill,	Spring Hill,	J. K. Duncan,	"	600	320	55	28	18	33	33	Water	3	1100
	1849 F	1	1	1796 Union, Vista,	Counelsville,	S. Shoyer,	"	600	320	55	28	18	33	33	Water	3	1100
	2 1849 S	1	1	1847 Buena Vista,	Armagh,	McClelland & co.	"	400	400	61	39	18	30	30	"	3	1100

A DETAILED STATEMENT OF ALL THE CHARCOAL COLD BLAST FURNACES IN WESTERN PENNSYLVANIA, — (Continued.)

County.	Sold by Sheriff or failed, and date.	Furnaces		Name of Works.	Situation, P. O.	Owners.	Kind of ore used.	Largest product.	Actual make, 1849.	No. of persons employed, etc.		Stack.		Kind of power used.	Kind of metal made and No.	Capacity.
		In blast.	Out of blast.							No. of persons employed.	No. of horses employed.	Feet high.	Feet bush.			
Indiana, Lawrence, Marion, " " " " " " " " " " " " " "	1848 S			1847 Loop,	Smixburg,	Hampton & Smith,	C	Tons	50	25	29	38		Water	3	1400
	1			11844 Martha,	Newcastle,	Power & Sons,	"	200	200	75	20	36		"	23	1100
	3			11837 Springfield,	Leesburg,	P. Sennett & Co.	"	500	500	41	20	32		"	1	900
	1850 S			11846 Oregon,	Mercer,	Lyons, Mix & Co.	"	300	300	50	25	637		Steam	2	1350
	2			11847 Iron City,	"	W. W. Wallace,	"	600	600	75	40	28	634	"	2	1350
	1849 S			11847 Somerset,	Johnstown,	Huber & Myers,	"	900	900	80	50	18	630	Water	3	1350
	1847 F			11844 Rock,	Franklin,	McKee & Harris,	C	300	300	43	15	21		"	3	700
	18			11843 Bullion Run,	Franklin,	A. Phipps,	"	760	760	58	38	18		"	3	1100
	1849 F			11830 Venango,	Phipps' Mills,	Gen. C. Read,	"	250	250	70	50	18		Steam	3	1200
	1850 S			11843 Annandale,	Hendersonville,	E. E. Clapp & Co.	"	503	503	50	25	18		Water	2	1100
" " " " " " " " " " " " " " " " " " " "	1846 S			1847 President,	President Furnace,	Charles Shippen,	"	910	910	62	46	17	6	"	2	1000
				1835 Mill Creek,	Mill Creek,	James Eaton,	"	700	700	57	50	17	6	"	3	1000
				1832 Van Buren,	Franklin,	Edmund Evans,	"	400	400	30	18	6	30	"	3	1350
				1834 Clay,	"	James Hughes,	"	700	700	46	33	18	6	"	3	1350
	1850 S			11844 Victoria,	"	Alexander Hays,	"	150	150	30	25	18	6	"	3	1100
	1850 S			11844 North Bend,	"	Hoover & Rens,	"	500	500	42	31	18	6	"	3	1100
	1848 S			11844 Union,	"	Guest, Williams & Co.	"	500	500	60	50	18	30	Steam	3	1100
	1848 S			11844 Texas,	"	E. Reynolds & Co.	"	1000	1000	60	50	18	30	Water	3	1100
	1847 S			11842 Liberty,	Sugar Creek,	A. W. Porter,	"	500	500	60	50	18	30	S&W	3	1350
				11843 Reymilton,	Franklin,	Dempsey & Wick,	"	500	500	65	58	18	30	Water	3	1100
Westmoreland, " " " " " " " " " " " " " " " " " "	1848 S			1836 Webster,†	Rockland,	Painter & Co.	"	653	653	53	32	18		"	3	1100
				1836 Sandy,	Franklin,	W. Cross & Co.	"	785	785	480	57	38	18	"	3	1350
				1838 Jane,	Clintonville,	N. B. & D. P. Hatch,	"	730	730	60	36	18	6	"	3	1100
	1850 S			11835 Jackson,	Cass,	J. D. Mathiot & Co.	"	500	500	30	40	18	30	"	3	1100
				1815 Ross,	West Fairfield,	J. Bell,	"	750	750	500	30	40	18	"	3	1400
				1809 Washington,†	Laughlinton,	Dr. Spear,	"	560	560	40	20	19	33	"	3	1400
	1849 S			11847 Ramsey,	Kiskiminitas,	W. McKierney,	"	90	90	50	25	19	33	"	3	1100
	1848 S			11846 Lockport,	Lockport,		"	400	400	50	25	19	33	"	3	1100
	34							72924	50968	5353	3520					104130

* Leased by F. H. Oliphant & Son. † Leased by S. Dempsey. ‡ Abandoned 1826; rebuilt 1848.

New York.

Ogdensburg Railroad.—The railroad was opened to Columbia Village on Wednesday, the 24th ult. The appearance of the cars was greeted at that place by a large concourse of people, who made the welkin ring with their shouts, as the iron horse came snorting in advance of the rattling train. Much credit is due to the directors and engineers on the road, for the vigor with which the work is pressed forward, and the skill with which it is constructed. On the 24th, a mile and a quarter of track was laid, the last 600 feet we are told was laid in fifteen minutes, and the directors confidently assert that they will have the track completed so as to run cars through the whole distance by the first day of October.—*Ogdensburg Sentinel.*

Buffalo and State-line Railroad.—The Fredonia Censor states that the whole line of the Buffalo and State-line is under contract—from Buffalo to Lagrange, to Asa Wood & Co. of Buffalo; from the latter place to Fredonia, to Hays & Co. of Rochester; from this place to near the line of the town of Ripley, to Cook and McDonald, of St. Catharines, Canada, and from that point to the Pennsylvania, to Messrs. Leet & Ely. The contractors are to have the work ready for the superstructure by the 1st January next.

Virginia.

Manassas Gap Railroad.—The company was organized in Alexandria on the 30th ult. Alexandria was made the locality of the office for the first year. The following resolution was adopted:

Resolved, That the Manassas Gap railroad be located and constructed for some convenient point on the Alexandria and Gordonsville railroad, through the Thoroughfare Gap.

The officers are:

President—Edward C. Marshall.

Directors—J. W. Foster, Alfred Rector, C. H. Hunton, Wm. H. Fowle, Wm. H. Irwin.

Chief Engineer—John McD. Goldsborough.

Clerk—Edward Green.

New Hampshire.

Ashuelot Railroad.—This road is nearly graded and ready for the rails. The bridges are so far advanced that the track layers can commence next week, and lay the rails without any delay, to the Connecticut river. The road will be open for travel in September.

Maine.

Androscoggin and Kennebec Railroad.—The report of the Directors of the Androscoggin and Kennebec Railroad have been published. The construction account, not yet quite complete, shows the cost of the road to Waterville, so far as now known, to have been \$1,621,878, or about \$30,000 per mile. The whole road was put in operation last December. For the six months ending with May, 1850, its expenses were \$29,925 26; and its receipts \$39,158 54. The largest monthly receipt was in March last, and the smallest in December. The Road has issued \$262,000 of preferred stock, on which holders are entitled to receive 5 per cent. semi-annually from the net earnings of the Road after paying interest to the bond-holders, until the net earnings shall be sufficient to pay an interest of six per cent. per annum on the stock, and on all the bonds issued for the first and second loans.—The first and second loans amount to \$300,000, and a third loan has been issued of \$100,000, payable in four years, at 6 per cent. interest. The existing liabilities of the Company are \$363,226 07, against \$135,031 79 of assets. To pay the interest on preferred stock and to bond-holders, and provide for the floating debt, are the first duties of the road; and hence it is obvious that "the stockholders must be content to forego any dividends for some two years to come."

AMERICAN RAILROAD JOURNAL.

Saturday, August 17, 1850.

Great Work on Bridge Building, etc., etc.

JUST published in medium folio, One Dollar, 75 cts. to subscribers.

Part I. of a "THEORETICAL AND PRACTICAL TREATISE ON THE CONSTRUCTION OF BRIDGES IN STONE, IRON AND WOOD," By George Duggan, Architect and Civil Engineer.

The present part contains beautifully executed plans, elevations, sections, and centering, of the Bridge of St. Malence, France, by M. Perronet, the eminent Architect and Engineer, and plans, elevations, sections, and details of the oblique Timber Bridge, 700 ft. long, constructed for a double track across the River Tyne, on the line of the Newcastle and Carlisle railroad, by John Blackmore, C. E., with an introductory article on the relative merits of the various materials employed in the construction of Bridges, as regards economy, strength and durability, and critical remarks on the various forms of bridges designed and constructed by the most eminent architects and engineers in Europe and America.

"PART VI. of Specimens of the Stone, Iron and Wood Bridges, etc., etc., of the United States Railroads," By George Duggan, Architect and Civil Engineer, contains specimens of the plates and letter press intended for the APPENDIX, being the commencement of a complete Treatise on the Theory and Practice of Bridge Building. This will be one of the most valuable works on the subject ever presented to the attention of engineers in this country—condensing the most important information on this branch of architecture contained in the writings of the most eminent scientific men in the French, German, Italian, and English languages, in the course of the last and present century. It will be illustrated by numerous accurate representations of bridges of the greatest celebrity in modern times. Elaborate articles will be given on the strength, property, and uses of the different materials employed, and on the most approved methods of constructing Cofferdams, Foundations, Centering, etc., with descriptions and drawings of the various engines and Machines that were found most useful in constructing the works, and a selection of such specifications as may be of service to the practical bridge builder. The sixth number treats of the Application of Iron to Railroad Structures, and is illustrated by beautiful drawings of the Bridge across the Delaware at Saw Mill Rift on the Erie Railroad, and of the bridge over Fairfield street, on the Manchester and Birmingham Railroad. The great success of this work thus far is the best tribute to its scientific merit and its adaptation to the wants of the American engineer."—[New York Daily Tribune, June 23, 1850.]

Published by George Duggan, 300 Broadway, New York, to whom all communications should be addressed and subscriptions forwarded.

Parties remitting Mr. Duggan \$5. and the remainder \$4 when they have been supplied with the first six parts of the "Theoretical and Practical Treatise on Bridge Building, etc.," shall receive it monthly as published. To those making Mr. Duggan a present remittance of \$9, the work will be forwarded post free to any part of the United States.

Massachusetts Railroads.

The stocks of the Massachusetts railroads, [with a few exceptions,] and those owned by the citizens of that State, in the roads of New Hampshire and Vermont, continue to fall, and it is apparently as difficult now as it was a year since, to foresee the point of their lowest depression. In the constant and regular depreciation of prices, all conjecture and opinion have been at fault. Those who have had the credit of possessing the most experience and knowledge in railroad matters, have been as wide of the mark as the merest novice in these affairs. The result has falsified all calculation, and people cease to speculate upon the future, and now quietly and patiently await its result.

The people of Massachusetts have expended about \$75,000,000 in railroads. Allowing that one-third only of this amount has been lost by depreciation of stock, here are 25,000,000 sunk by overinvestment in railroads alone. This has been productive of great individual distress, and is exerting

a very injurious influence upon the business of that State, which does not participate in the present revival, which, after a long period of depression is now showing itself in many parts of the country, and which was anticipated in all. She has invested in unproductive property the means she formerly had to carry on her business, and it is to be feared that Boston in consequence will lose the relative position she has maintained with the leading Atlantic cities. What makes it still more unfortunate for her, is the fact, that commerce and manufactures, which, with the railroad interest, represent a greater part of the capital of Massachusetts, are at a low ebb, leaving her no means by which she can immediately recover her former prosperity.

That she will outgrow this state of things, we do not doubt. This result is as certain as the fact that she is superior to most other parts of the country in skill, industry, education and dogged perseverance. But she must first pay the penalty for some grievous mistakes, while other sections which have not committed them, by not pushing their enterprises to the same extent, and have their resources unimpaired, are profiting by her mistakes, and are pushing forward in their career, while she is recovering the ground she has lost.

One reason why these stocks have gone so low, is the abundance of them in market. They feel the same law of demand and supply to which merchandise is subject. Stocks are a drug now which would be sought after if they were secure. The buyer now has it all his own way. These stocks will gradually become absorbed, and they will then find their true value. This we believe above the present mark, in most cases. Some stocks, we think the Vermont Central for instance, will go much lower. We do not believe this to be worth \$20 per share. Here is a stock by which the Massachusetts people have been most egregiously humbugged. The efforts of a few men, whom accident gave some reputation in railroad matters, and who took this road under especial care, and by dint of puffing, and putting their reputation as railroad men into the case, and by claiming that this was a line superior in all respects to the Western, "the stock of which was once down to 40 cents on the dollar, and is now above par," enabled this stock to maintain for a long time a fictitious value in the market. How often have we seen these oracles come forward and assert that this stock was sure to pay, that it was one of the best in the market, and cautioning people not to dispose of it?—These men were for a long time credited, and under their advice people held on. The result is well known. It presents but an exaggerated history of many other roads.

In the construction of their railroads the Massachusetts people have proceeded upon the idea that any road between two points was sure to pay. So much for wisdom displayed in the selection of routes. Other matters equally important, such as the road was sure to pay, however managed, were assumed with equal facility. The proofs are to be found in the present condition of railroad property. The example of that State is becoming valuable in teaching, rather what should be avoided, than followed. It is negative rather than positive. It shows the danger of following self constituted oracles, and of pushing ahead too fast in great works where there are no lights in the past to guide.

With all their mistakes, we believe it may be truly said that the Massachusetts people have done

better than those of any other State would have done under similar circumstances. The results which we witness there was inevitable from the expenditure, without experience to direct, of such immense sums. It is the order of nature that truth can only be reached, by first exploding all error. An unsuccessful attempt may be valuable, in showing that it is not the right way. Massachusetts has done great service here; more than her share. If she does not complain, other people have no right to do so for her, who are now reaping the advantage of her superior enterprise and activity, in the lessons which her disasters are teaching.

Railroads vs. Politics.

The rapid progress that is now making in the physical sciences, including in this general term works of internal improvement and communication, and the attractions which they possess both for the educated and unlearned, are doing more to soften the asperities of political feeling and secure the quiet and continued union of the States, than all other influences combined. We are getting to be a very mercurial people, and politics thus far has been the theatre where our extra steam has been worked off. In religious matters we wisely allow every man to think for himself, and consequently enjoy uninterrupted calm, as far as religious sects or parties are concerned. These treat each other with the utmost decorum, and each has work enough to do in making converts out of those who, by habit, education birth or connection, are nominally attached to its particular sect. In the religious world everything is orderly, decorous, and quiet, the result of unrestrained exercise of opinion.

The arena of politics is the great theatre where our people are arrayed against each other. As is always the case in contests of any kind, personal feeling soon takes the place of the idea upon which parties first divided, and the contest becomes one for victory and not for principle. Such in the main is a true statement of the condition of things at Washington at the present time. This is aggravated by the class of men sent there, many of them men without education, more without those qualities which entitle them to esteem and respect; men who owe their place to superior cunning or party usage and machinery, who, conscious of being without merit to attract attention, challenge it by the extravagance of their speeches and conduct.—They become notorious that they may become known. A member of Congress fears that he shall never be heard of after his time of service is out. He therefore adopts the superlative, both in action and speech, as the only road left him to fame.—The ultra abolitionist of the north, and the ultra pro-slavery man of the south, both act upon the same principle. A change of local position would have been an entire change of principle and profession. The most rabid free soiler, if he had been planted in South Carolina, would, in giving himself up to the natural extravagance, and very like, to the vindictiveness of his nature, and to his love of notoriety, are outdone the most rampant slaveholder in Congress, while the latter if he had been brought up at the north, would have displayed the same extravagance in favor of what he would call freedom, as he now does in favor of slavery. Extremes meet. The principles of such men are mere matters of accident, and take their character from their associations. The objects which call them into action are merely the occasion not cause of their display. We pity the Negro, who should ever become under change of cir-

circumstances, the slave of some philanthropists we know.

These men, the extremes of parties, who are false because they are extravagant, would destroy the union if they had the power. Our great danger lies here. So long as politics continue to be the path to distinction, so long will it be crowded by such persons whose impudence and assurance will secure success in contests, from which men of real merit retire in disgust. To correct this great evil, other avenues to laudable ambition must be opened; the attention of our people must be employed by other pursuits which will withdraw them from political contests, and by substituting for these interests of a higher value, will lead them in the end to view political matters in their true light, and to find in other pursuits the theatre for the exercise of higher and nobler ambition, having for its object the good of all and not of a section—a good which can only be realized to the fullest extent by the continuance of our union, as our whole population are to be its recipients.

Such is the new field that railroads are opening before our citizens ambitious of distinction and fame. To the promotion of these works, many who have been most distinguished for political ability and success, in the south and west particularly, are now consecrating themselves. Here they find full scope for their activity, their enthusiasm, and their eloquence. Here success is measured by the amount of good done to others. In politics it must generally be purchased by the destruction of a rival. A man who by his own exertions secures the construction of a railroad, that would not have been built but for his efforts, is a benefactor of his race. In addition to the mere material good it accomplishes, in cheapening transportation, it becomes the most potent schoolmaster in the land. What a lesson does a locomotive teach! How poignantly does an uneducated farmer, who has never been beyond the smoke of his own chimney, feel his ignorance when he first sees this wonderful invention! He feels how little he knows compared with what others know. He feels how puerile have been all his ideas and objects compared with those of the great souls, the parents of these inventions. He at once repudiates his old teachers, and those ideas which have thus far constituted his life. He resolves thenceforward to call neither man nor tradition master; but to inquire and seek for himself. He is disenthralled from the bondage in which he has been held.—He will now believe only what he can see, and will hold his judgment in suspense till he can make a proper examination.

It is this freedom of opinion which is essential to the true liberty of the state. In passion mankind are all alike. In intellect they are infinitely varied. In this department of our nature no two men will agree. Each has his own theory adapted to his peculiar mental organization. One party refers the external appearance and formation of the earth to fire; another to the action of water. One says that all electricity is identical; another sees a manifestation of two kinds. No two will agree upon one point. This is practically illustrated in the great variety of religious sects before referred to, and the great freedom enjoyed is the true cause of order which prevails.

In all countries it is the action of the masses that is to be feared. Men act in masses in proportion as they are uneducated. They are subservient just in proportion as they are ignorant. A dema-

gogue may influence the passions of a whole community, and direct them at his will. This is why the priesthood of some countries exercise such an influence, and explains their opposition to education. The Pope knows that the locomotive would dethrone him in the end, and he will not allow them in his domains. He loses his power just in proportion as his people increase in knowledge. Despotism and education are the antipodes, the enemies of each other the world over. Every railroad therefore is the coadjutor of freedom. It educates the people. It develops a higher interest than politics. It generalizes our views. It attaches us equally to every part of our country. It destroys clanship. It detaches us from sectional and party cliques. It lessens the importance of political questions in our eyes. In fine, it takes away our old and gives us new ideas and pursuits which are identical in every part of our great domain.

Vermont and Canada Railroad.

Will some friend inform us who are "the company of rich capitalists" who have taken the stock of the Vermont and Canada railroad? It has been taken so often by said company that the public are desirous of knowing who constitute this formidable firm.

Michigan.

At the annual election in June, the following gentlemen were chosen directors of the Michigan Southern railroad company:

George Bliss, Springfield, Mass.; Charles Butler, John B. Jervis, Edwin C. Litchfield, New York city; Hugh White, Saratoga County; William L. Marcy, Albany; John Stryker, Rome; Elisha C. Litchfield, Detroit, Mich.; Charles Noble, Monroe, Mich.

This road is to be completed to Coldwater in September or October next. Beyond this point the road is under contract to Sturges, a distance of about 25 miles, to be completed, we believe, this fall. From Sturges, the distance to the Indiana State-line is about 25 miles. After reaching Indiana, the company propose to proceed under the charter of the Northern Indiana railroad company. This charter extends to Michigan city. Beyond this, we see it stated that the above company are acting under the western division of the Buffalo and Mississippi charter, is already at work and has twenty miles under contract, to be done by 1st December next.

The opening of the whole line to Chicago is a matter of great importance not only to the public, but to the roads which are to be connected with it.

Pennsylvania.

Ohio and Indiana Railroad.—Although we have already directed the attention of our readers to this new, and, to us, very interesting railroad project, yet its importance to this city calls for another, and more particular notice.

At the last session of the Legislature of Ohio, the Ohio and Indiana railroad company was chartered, to construct a railroad from the western terminus of the Ohio and Pennsylvania railroad, to Fort Wayne, in Indiana, a distance of about one hundred and forty-one miles. This road will form part of the great north western line, from Pittsburgh to Chicago. The company is organized, and Crawford county has subscribed one hundred thousand dollars to the stock. Another county on the line has voted to subscribe an equal amount.

Jesse R. Stranghan, Esq., has been chosen the Chief Engineer of the company, and he has alrea-

dy located the road from Crestline to Bucyrus.—It is expected that sufficient means will shortly be provided to grade and bridge sixty miles of the line. The country is remarkably favorable for the construction of a good railroad, and the flourishing town of Fort Wayne is a most important point to reach.

Ohio.

Cleveland and Pittsburgh Railroad.—As each month rolls round, our surprise is greatly increased at the rapidity with which this work is progressing. The contractors, Messrs. Chamberlain & Co., are pushing every facility presented to complete the work, and there is not the least doubt but that the contracts will be filled within the time specified.—The several bridges in this vicinity, (which are heavy works) are progressing fast and will be completed at an early day. It is expected that the contractors will commence laying down the track at this point sometime during this month. The ties are mostly on the ground, and 73 tons of spike have already arrived. Two locomotives have been shipped from the Taunton works, Massachusetts, and will be here in a few days, to assist in putting on the superstructures. The June estimate just paid to the contractors amounts to \$46,383 63. In fact, but comparatively a few days more will pass before we shall hear the rumbling of the cars over the track of the Cleveland and Pittsburgh railroad, between Ravenna and Cleveland.—*Portage Whig.*

A Canal Propeller.

The Chicago Daily Advertiser says that a new species of canal craft made its appearance in that port on the 19th, named the "Chief Engineer of Illinois and Michigan Canal." It is built after the model of the largest sized canal boats—has an upper deck, and will accommodate 35 passengers, and is propelled by two engines, and her average speed in coming up the Illinois river was five miles per hour, having 100 tons of freight on board. The canal authorities, after a careful examination, gave it as their opinion that she caused less disturbance of the water than any packet or line boat. She is owned by Captain O. C. Lewis, of Chicago, and W. A. Dickerman & Co., of Liverpool, England.

Illinois.

Mississippi and Atlantic Railroad.—This company has recently been organized by the choice of the following gentlemen as officers:

President—Wm. S. Wait, of Bond.

Directors.

Justin Harian, of Clark.

W. B. Archer, "

J. V. Hedges, "

Lo Va Corey, "

J. Cutright, of Cumberland.

J. Ewart, "

J. F. Waschefort of Effingham.

P. Funkhouser, "

—Waterman, of Fayette.

R. Blackwell, "

Francis Gill, "

S. White, of Bond.

Benj. Johnson, "

W. McCain, of Madison.

S. H. Mudge, "

Curtis Blackman, "

Treasurer—E. Capps, of Fayette.

Secretary—H. P. H. Bromwell, of Clark.

Principal Engineer—W. H. Morrison.

The object of this company is to build a railroad from Terre Haute, Indiana, to the Mississippi river opposite St. Louis, Mo.

The amount of stock subscribed considerably exceed \$160,000. Ten per cent. on this amount has been paid in, and the other requisitions of the gen-

eral railway law complied with to project the organization and vest in the company all the valuable rights and privileges which the law confers.

Alabama.

Mobile and Girard Railroad.—This road is an interesting one to the people of Savannah, as it will be, through the Muscogee (Macon and Columbus) road, the great link to connect this port with Mobile and New Orleans. It derives interest to us from another cause too. It must effectually check the progress of our South Western railroad through Fort Gaines to Pensacola. It supplies the place of this extension, and reaches the Waters of the Gulf of Mexico at a point some sixty-five miles further west than a road would having its terminus on the east side of Pensacola harbor.

The eastern terminus is fixed at Girard, Ala., opposite Columbus, Ga.; that of the western will be at one point near the head of Mobile Bay.—The length of the road will be about 250 miles, varying with the western terminus, and will pass through the counties of Russell, Macon, Pike, Montgomery, Lowndes, Butler, Monroe, Conecuh, and Baldwin, moving generally upon a dry ridge, requiring few and short bridges and but little expense for drainage. Gradients will not exceed 42½ feet per mile. The change of course is effected by curves and radii not exceeding 1,910 feet. There will be several long tangents or straight lines upon the route, one probably of twenty miles in length in Baldwin county.

At Girard the elevation is 250 feet above tide water level. Within fifty miles of that place, at Chunnynuggee ridge in Macon county, the line reaches an altitude of six hundred feet. The elevation is maintained for 130 miles, and then gradually descends to the waters of Mobile Bay, following the ridge which divides the waters flowing into the Alabama and Tensas from those which have an outlet into the Gulf of Mexico near Pensacola. The line strikes Greenville, the county site of Butler county, and passes within thirty miles of Montgomery, about forty miles of Pensacola, and within twenty of Claiborne.

In addition to the above, we learn that nearly sufficient subscriptions have been obtained to complete the grading and superstructure of the whole line. A bill has passed the Senate, giving to the company the alternate sections of public lands through which the road runs. It is estimated that this will secure to the enterprise about \$1,200,000. Besides this, the President of the company has assurances that he will be able to get a cash subscription in New Orleans sufficient to iron the whole road.

New York.

Buffalo and Cohocton Valley Railroad.—The directors of this company met at Avon last week, with the design of effecting a permanent organization. The Buffalo directors were not present, owing to the fact that the notice of the meeting did not reach them in time, and it was thought advisable to organize only temporarily. This was done by electing Hon. John Magee, of this village, President, and E. Howell, Jr., Secretary. Subscription books have been prepared and are ready for distribution along the line. Let the people take hold of the matter, and the work will move on. We understand that the best feeling was manifested at the meeting, and all felt confident, with proper effort, of the success of the enterprise. The directors will probably meet again early next month to effect a permanent organization. In the meantime the work of getting subscriptions and releases of the right of way will proceed. A corps of engineers are now upon the line between Batavia and Buffa-

lo, making an accurate survey with reference to the permanent location of that portion of the road. —*Steuben Co. Courier.*

Sale of Ogdensburgh Railroad Stock.

The sale of the remaining bonds of the Ogdensburgh railway company took place at New York on Thursday, and was effected on the following terms:

269,000 at.....	90	
40,000 at.....	90	5-100
40,000 at.....	90	10-100
25,000 at.....	90	20-100
38,000 at.....	90½	
42,000 at.....	90½	
10,000 at.....	90½	
25,000 at.....	91	
6,000 at.....	91½	
4,000 at.....	92	
1,000 at.....	93	

500,000

These were the accepted bids out of a total amt. of \$746,000 offered. The bids were on New York and Boston account, chiefly for the latter, with a portion on northern account.

The bonds of this company amount to \$1,500,000, \$750,000 of which have been taken by individual stockholders, at par; \$250,000 were paid for railway iron, cars, etc., also at par; and the balance has been disposed of as stated above.

The company are now placed in funds to pay off the entire floating debt, and to complete the road with ease and despatch. The road is in use at the present moment for a distance of forty-five miles, but the entire length from Rouse's Point to Ogdensburgh will be completed and in running order by the first of October next. This road promises to be a very remunerating one, from the amount of freight that will offer. For the distance now finished all the force of the company is fully and constantly in use for freight.

Great American Engineering

AND MECHANICAL WORK, just published in a medium folio One Dollar, 75 cts. to Subscribers. Part VII of "Specimens of the Stone, Iron & Wood Bridges, Viaducts, Tunnels, Culverts, &c., &c., of the United States Railroads." By George Duggan, Architect and Civil Engineer.

The present part contains beautifully executed plans, elevations, sections and details of the elegant timber Bridge, (Burr's Patent,) 150 feet span, across Salmon River, Malone, on the line of the Northern-Ogdensburgh-railroad, and isometrical views of Bridges 30, 40, 60, 82 and 88 feet span on the line of the Utica and Syracuse railroad, with specifications, form of contract, &c., &c., for the Connecticut River railroad.

"It is a work that was a great desideratum, and must prove of great benefit to the engineering profession generally, and especially to the tyro in practical engineering and mechanical knowledge; in truth it strikes us, that it would require years of labor and patient toil on the part of a young engineer to prepare the drawings, and collect the information that will be embodied in this work, and can now be secured for the trifling sum of \$9."—*Scientific Amer.* March 16, 1850.

In connection with this subject (Iron Railroad Structures) we take occasion to call attention again to Mr. Duggan's valuable and expensive publication, exhibiting drawings, with full descriptions of the various stone, iron and wooden bridges, viaducts, tunnels, culverts, etc., of all the Railroads in the United States. Mr. Duggan is an accomplished Architect and Civil Engineer, who came from Ireland to it is country to exercise his profession; but finding Railroad construction here, in many respects, different from that he had been accustomed to in Europe, he applied himself to the study of our system; and the fruits of his researches and investigations embodied in this work, are well calculated to meet the exigencies of engineers, and to assist draughtsmen, bridge builders, mechanics and students.—*[N. Y. Journal of Commerce, Feb. 14, 1850.]*

Published by **GEORGE DUGGAN,**
300 Broadway, New York.
To whom all communications should be addressed, and subscriptions forwarded.

MINING AGENCY.

Capt. O. H. Matthews,

Civil and Mining Engineer, F. G. S., London, etc.
HAVING completed his three years engagement on Lake Superior, is open to negotiate for another appointment as Mining Agent, or Superintendent of Mines. Also, to give his opinion and advice upon Mineral Lands, to Buyers and Sellers of Stock, or to be consulted on any section in this important branch of national industry.

The most implicit confidence may be relied on, and immediate attention given to all communications (pre paid). Address Capt. O. H. Matthews, Toronto, July 27th, 1850. 3m

Gloucester Iron Works, GLOUCESTER, NEW JERSEY,

NEARLY OPPOSITE PHILADELPHIA.

THE subscribers having made extensive alterations in their works, are now prepared to receive orders for all kinds of Stationary and Marine Engines, Boilers, Locomotives, Sugar Mills, and every description of Mill Work.

Also—Orders for Iron and Brass Castings executed with despatch.

Having secured the valuable services of Mr. David Matthew as Superintendent (who has been for five years foreman in the Iron Works of John Watchman, now the Vulcan Works, Baltimore, and for 12 years superintendent of the Mohawk and Hudson and the Utica and Schenectady Railroads, New York,) they feel confident that all orders entrusted to them will be faithfully executed.

Having an extensive Wharf in front of their works, it will afford a safe harbor for all classes of steam vessels that may require repairs during the winter.

C. M. & J. C. SITER.

Gloucester, July 24, 1850. 1m.

Ray's Patent India Rubber Car Springs.

Savannah, Ga., May 22, 1850.

FOWLER M. RAY, Esq.,

Dear Sir: I have no hesitation in saying, after having used on our road your springs and Fuller's, that I consider yours decidedly the best in every particular, and in this opinion I am sustained by all our officers. Fuller's spring has a tendency to split, and also to chafe or abrade by the constant friction on the cast iron plates or disc: and in my opinion is not near so elastic as yours.

Your springs, which have been in use on our road for 12 or 15 months past, and in constant use under both passenger and freight cars, are to all appearances as elastic, sound and good, as when first put in use.

We are now building eighty-five new cars, of which for fifty-sets the springs have been ordered of you.

GEORGE A. ADAMS,

Master Carpenter,

Central Railroad and Banking Co. of Georgia.

Connecticut River Railroad Office,
Northampton, May 4, 1850. }

E. CRANE, Esq.,

Dear Sir: It is now about two years since I first tried the experiment of using a set of Ray's India-rubber Springs upon one of our merchandise cars, and although the car has been in constant service since that time, I do not on examination find the slightest difference either in the thickness or elasticity of the material.

The same result has followed wherever we have applied them, either for wheel or draw springs on Engines, Tenders or Cars. At present we use no other; either in replacing old springs or building new cars—and I am perfectly satisfied that for economy, durability, safety, and ease of motion, that Ray's India-rubber is the best article for Springs which has been presented to the public.

Yours respectfully, J. HUNT,
Supt. Connecticut River Railroad.

EDWARD CRANE, Esq.,

Dear Sir: Having applied to cars of the Boston and Worcester Railroad Corporation, Ray's Vulcanised Rubber Springs (where they have been in use for some two years last past), I have had occasion to observe their operation, and am free to say in answer to your inquiries, that they retain their elasticity perfectly during all changes of atmospheric temperature: and are in my opinion a most valuable acquisition to Railroad Cars—are not liable to derangement, as is the case with steel springs; while at the same time it costs less to apply them. Respectfully yours,

D. N. PICKERING,

Supt. Motive Power, Bost. & Wor. Railroad.
Boston, April 15th, 1850.

Faggotted Car and Engine Axles

FORGED by RANSTEAD, DEARBORN & Co., Boston, Mass.
These Axles enjoy the highest reputation for excellence, and are all warranted.

Ogden & Martin's ROSENDALE CEMENT.

WE are prepared to enter into arrangements for supplying our Cement for public works or other purposes. We warrant the cement equal in every respect to any manufactured in this country. It attains a great degree of hardness, sets immediately under water, and is a superior article for masonry coming in contact with water, or requiring great strength.

For sale in tight barrels, well papered, at their office by
OGDEN & MARTIN, 104 Wall st.
February 16, 1850.

The above cement is used in most of the fortifications building by government.

Railroad and Mathematical Instruments.

KUNS & BASELER, Mathematical Instrument makers, manufacture and keep for sale all kinds of mathematical instruments: also drawing instruments, scales and balances for the use of chemists, professional gentlemen, jewellers, etc., etc., of the most perfect description, at the lowest price, at 81 Nassau street, New York.

Ibbotson, Brothers & Co's CELEBRATED CAST STEEL

AND
Best Cast Steel Royal Improved Files, well known as better adapted for Engineers' and Machinists' purposes than any now in use in the United States.

Every description of Square, Octagon, Flat and Round Cast Steel, Sheet, Shovel and Railway Spring Steel, etc., and Steel to order for any purposes—manufactured at their works in Sheffield—and universally known by the old stamp "Globe."

HENRY J. IBBOTSON, Agent,
218 Pearl st., New York.

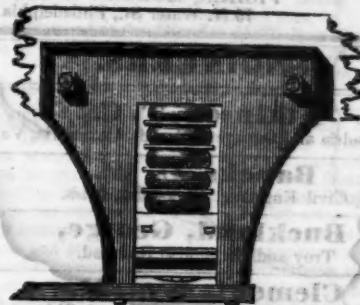
Railroad Iron.

OF ANY PATTERN AND WEIGHT,
Of a Favorite Brand,
And deliverable in Bond, or Duty paid, at any Port of the U. S., contracted for on favorable terms, by
CHARLES ILLIUS,
20 Beaver St., New York.

Pig and other Iron also contracted for. Sole Agent for "Barter's Machine and Burning Oil"—particularly adapted for "Railroads" and other Machinery—Preferred to Sperr by the many now using it, and 25 per cent. cheaper.

Coal.

CUMBERLAND SEMI-BITUMINOUS COAL
superior quality for Locomotives, for sale by
H. B. TEBBETTS,
No. 40 Wall St., New York.
May 12, 1849. 1m19

FULLER'S PATENT INDIA RUBBER SPRING.

THESE SPRINGS ARE THE CHEAPEST,
the lightest and most durable of any yet known. They are easily applied to new or old cars, and there is small possibility of any accident occurring to them. Other parties through Mr. Ray set up claims to an India Rubber Spring which, though the same in principle, is very inferior in its working and durability. Actions are in progress for an Infringement on Fuller's Patent against parties using that Spring.

The superiority of Fuller's Spring over that claimed by Mr. Ray is fully established and has frequently been testified to. The following are from gentlemen who have had much experience with both Springs.

"It will afford me pleasure to recommend your springs to the companies in this region, in preference to Ray's which I am confident are inferior in mechanical arrangement to yours."
JOHN M'RAE,
Engineer S. Carolina R. R., Charleston.

"I do not hesitate to allow you to say that I concur in Mr. M' Rae's opinion that Ray's springs are inferior in mechanical arrangement to Fuller's. I repeatedly expressed that opinion long before Mr. M' Rae had seen your springs (as I believe) and entertain it still."
WM. PARKER,
Gen'l Supt. of Baltimore and Ohio R. R.

Office of Sup't Norwich & Worcester R.R. Co.,
December 26, 1849.

"I most fully concur in the opinion of Jno. McRae, Engineer of S. Carolina Railroad, that 'Rays Springs are inferior to Fuller's Springs,' and shall with pleasure recommend them to all Railroad Companies for adoption. I have used both springs on this road and have no hesitation in saying that I should in all cases prefer Fuller's Spring."

SAM'L H. P. LEE, JR.,
Sup't and Engineer.

Office B. & P. R. R. Co.,
Boston, 20th December, 1849.

"This company have cars fitted up with both Ray's and Fuller's 'Metallic India Rubber Springs,' and do not hesitate to say that Fuller's arrangement is very much superior to Ray's."

W. RAYMOND LEE, Supt.

The following result has been obtained by experiment upon one railroad.

A set of Trucks fitted
with Steel Springs cost \$190.77 and weigh 2355 lbs.
The same with Fuller's
Springs, 131.71 " 1911 lbs.

Difference, \$59.06 " 444 lbs.

Not only is there an advantage in the cost, but owing to the great reduction in weight, the car can be made lighter throughout, and so an enormous saving in weight may be effected in a Train.

AGENTS.

G. M. KNEVITT, 38 Broadway, N. Y.,
JOHN THORNLEY, 110 Chestnut St., Philad.
The **BOSTON BELTING CO., Milk st., Boston.**
January 2, 1850.

American Cast Steel.

THE ADIRONDAC STEEL MANUFACTURING CO. is now producing, from American iron, at their works at Jersey City, N.J., Cast Steel of extraordinary quality, and is prepared to supply orders for the same at prices below that of the imported article of like quality. Consumers will find it to their interest to give this a trial. Orders for all sizes of hammered cast steel, directed as above, will meet with prompt attention.
May 26, 1849.

**To Merchants, Railroad Companies, Machinists and Boiler Makers.**

THE subscribers beg leave to call attention to their very large stock of Iron and Steel—of American, English, Swede and Norway make—of all the different kinds in use. Also, Railroad Iron, Ship, Boat and Railroad Spikes. They are also Agents for the Best Pennsylvania Locomotive Boiler and Tank Iron, each sheet of which will be stamped and warranted, at lowest mill prices. Our prices for all kinds of iron will be found very low, either for cash or approved credit.
BRINK & DURBIN, Philadelphia.

CUT NAILS OF BEST QUALITY, BAR IRON
(Including Flat Rails) manufactured and for sale
by **FISHER, MORGAN & CO.,**
75 N. Water St., Philadelphia.

ENGINEERS.

Atkinson, T. C.,
Alexandria and Orange Railroad, Alexandria, Va.

Baneks, C. W.,
Civil Engineer, Vicksburg, Miss.

Buckland, George,
Troy and Greenbush Railroad.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer, Croton Aqueduct, New York.

Davidson, M. O.,
Eckhart Mines, Alleghany Co., Maryland.

Fisk, Charles B.,
Cumberland and Ohio Canal, Washington, D. C.

Felton, S. M.,
Fitchburg Railroad, Boston, Mass.

Floyd-Jones, Charles,
South Oyster Bay, L. I.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Gilbert, Wm. B.,
Rutland and Burlington Railroad, Rutland, Vt.

Grant, James H.,
Nashville and Chattanooga R. R., Nashville, Tenn.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Holcomb, F. P.,
Southwestern Railroad, Macon, Ga.

Johnson, Edwin F.,
New York and Boston Railroad, Middletown Ct.

Latrobe, B. H.,
Baltimore and Ohio Railroad, Baltimore, Md.

Miller, J. F.,
Worcester and Nashua Railroad, Worcester, Mass.

Morris, Elwood,
Schuylkill Navigation, Schuylkill Haven, Pa.

Morton, A. C.,
Atlantic and St. Lawrence Railroad, Portland, Me.

McRae, John,
South Carolina Railroad, Charleston, S. C.

Nott, Samuel,
Lawrence and Manchester Railroad, Boston.

Prichard, M. B.,
East Tennessee and Georgia R. R., Cleveland, Tenn.

Roebbling, John A.,
Trenton, N. J.

W. Milnor Roberts,
Bellefontaine and Indiana Railroad, Marion, Ohio.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Northern Railroad (Ogdensburg), Malone, N. Y.

Sours, Peter,
Rahway, New Jersey.

Stark, George.,
Bost., Con. and Mont. R. R., Meredith Bridge, N. H.

Steele, J. Dutton,
Pottstown, Pa.

Trautwine, John C.,
Panama Railroad—Address through office of Panama
Railroad Co., 78 Broadway, N. Y.

Trimble, Isaac R.,
Philad., Wil. & Baltimore Railroad, Wilmington, Del.

Tinkham, A. W.,
United States Fort, Bucksport, Me.

Thomson, J. Edgar.,
Pennsylvania (Central) Railroad, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

Whipple, S.,
Civil Engineer and Bridge Builder, Utica, N. Y.

Williams, E. P.,
Auburn and Schenectady Railroad, Auburn, N. Y.

Williams, Charles H.,
Milwaukee, Wisconsin.

HOTELS.

Exchange Hotel,
Adjoining Eastern Railroad Depot,
BUFFALO, N. Y.
BY.....**FISK & SPERRY,**
Late of Delevan House, Albany.

J. D. Abraham, Architect,
NO. 300 MAIN STREET,
BUFFALO, N. Y.

Fountain Hotel,
LIGHT STREET, BALTIMORE,
P. THURSTON.....Proprietor.

DUNLAP'S HOTEL,
On the European Plan,
NO. 135 FULTON STREET,
Between Broadway and Nassau St.,
NEW YORK.

MANSION,
Corner of Maine and Exchange Streets,
P. DORSHIMER. **BUFFALO.**

GUY'S
United States Hotel,
(Opposite Pratt street Railroad Depot,)
BALTIMORE.
JOHN GUY. **WILLIAM GUY.**

American Hotel,
Pratt street, opposite the Railroad Depot,
BALTIMORE.
HENRY M. SMITH.....Proprietor.
Late of the Exchange & St. Charles Hotels, Pittsburg.

Washington Hotel,
BY JOHN GILMAN,
\$1 Per Day.
No. 206 Pratt street, (near the Depot),
BALTIMORE.

Barnum's City Hotel,
MONUMENT SQUARE, BALTIMORE.
This Extensive Establishment, erected expressly
for a Hotel, with every regard to comfort and conven-
ience, is situated in the centre and most fashionable
part of the city, and but a few minutes' walk from the
Railroad Depots and Steamboat Landings.
The House has lately undergone a thorough repair,
embracing many valuable improvements, and will ac-
commodate 250 Guests. **BARNUM & CO.**

JONES' HOTEL,
NO. 152 CHESTNUT STREET,
PHILADELPHIA.
BRIDGES & WEST, Proprietors.

BUSINESS CARDS.**Lithography.**

JOHN P. HALL & CO.,
161 Main st., Buffalo, (Commercial Advertiser Build.)
Are prepared to execute all kinds of Lithography
in good style and at reasonable rates. Particular at-
tention will be paid to Engraving Railroad Maps, En-
gineer's Plans and drafts, etc., and orders in this line
are respectfully solicited.

J. T. Hodge

Will attend to the examination of mining tracts near
Lake Superior, and prepare Reports and Maps.
Address, during the Summer,
[Ontanagon Postoffice, Lake Superior.

Cumberland Steam Coal,

FROM THE
FROSTBURG MINES, MD.

H. A. TUCKER,
Agent of Frostburg Coal Co.
No. 50 Wall Street, New York.

Eaton, Gilbert & Co.,
Railroad Car, Coach and Omnibus Builders,
TROY, N. Y.

Nathan Caswell,

METAL BROKER, 69 WALL ST., N.Y.
For the Purchase and Sale of Railroad Iron (new and
old,) Boiler Plates, Pig and Bar Iron, Lead, Tin, Cop-
per, Spelter, etc. Refers to
Messrs. Boorman, Johnston, & Co., New York.
" Grinnell, Minturn & Co., "
" Barston, Pope & Co., "
" Earps & Brink, Philadelphia.
" E. Pratt & Brother, Baltimore.
John Barstow, Esq., Providence.
Lewis Bullard, Esq., Boston.
February 9, 1850. 6m*

**United States Railroad Guide
and Steamboat Journal.**

CONTAINING OFFICIAL TIME ADVERTISEMENTS,
Tables of Stations, Distances, Fares, Time, etc.,
with much miscellaneous matter for the travelling pub-
lic. Price 12 cents a copy. Yearly subscription \$1.
Published at 43 Ann street, New York.

STEEL AND FILES.

R. S. Stenton,
20 CLIFF STREET, NEW YORK,

AGENT FOR
J. & Riley Carr's
BAILEY-LANE WORKS, SHEFFIELD,
Manufacturers of Cast, Shear, German and Blister
STEEL
Of all descriptions. Warranted Good
FILES.

Manufacturers of Machinists' Warranted Best Cast
Steel Files, expressly for working upon Iron and Steel,
made very heavy for recutting.
A full Stock of Steel and Files at all times on
hand. 6m4

Walter R. Johnson,
CIVIL AND MINING ENGINEER AND AT-
torney for Patents. Office and Laboratory, F St.,
opposite the Patent office, Washington, D. C.

Dudley B. Fuller & Co.,
IRON COMMISSION MERCHANTS,
No. 139 GREENWICH STREET,
NEW YORK.

Manning & Lee,
GENERAL COMMISSION MERCHANTS,
NO. 51 EXCHANGE PLACE,
BALTIMORE.

Agents for Avalon Railroad Iron and Nail Works.
Maryland Mining Company's Cumberland Coal 'CED'
—'Potomac' and other good brands of Pig Iron.

Cop Waste.

CLEAN COP WASTE, suitable for cleaning Rail-
road, Steamboat and Stationary Engines, con-
stantly on hand and for sale by
KENNEDY & GELSTON,
54 Pine St., New York.
October 27, 1849, 3m

**Railroad Car Manufacturer's
Furnishing Store.****F. S. & S. A. MARTINE,**
IMPORTERS AND MANUFACTURERS OF**RAIL ROAD CAR &
CARRIAGE LININGS,**PLUSHES, CURTAIN MATERIALS, ETC.,
112 WILLIAM ST., NEAR JOHN.
3-4 and 6-4 Damasks, Union and Worsted; Mo-
reens, Rattinets, Cloths, Silk and Cotton Velvets,
English Bunting**Samuel Kimber & Co.,
COMMISSION MERCHANTS**WILLOW ST. WHARVES, PHILADELPHIA.
AGENTS for the sale of Charcoal and Anthracite
Pig Iron, Hammered Railroad Car and Locomo-
tive Axles, Force Pumps of the most approved con-
struction for Railroad Water Stations and Hydraulic
Rams, etc., etc.
July, 27, 1849.**James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.**PATENTEE OF THE
HERRON RAILWAY TRACK.
Models of this Track, on the most improved plans,
may be seen at the Engineer's office of the New York
and Erie Railroad.**To Railroad Companies.
—WROUGHT IRON WHEELS—
SAFETY AND ECONOMY.****NORRIS' LOCOMOTIVE WORKS,
SCHENECTADY, NEW YORK,**
Are Manufacturing Wrought Iron Driving, Truck,
Tender, and Car Wheels—made from the best Ameri-
can Iron. Address **E. S. NORRIS.**
May 16, 1849.**George O. Robertson,
BROKER IN SCOTCH AND
AMERICAN PIG IRON;**
Bar Iron, Lead, Spelter, Tin, Copper, etc.,
No. 4 Liberty Place, MAIDEN LANE,
(Near Broadway.)
NEW YORK**Manufacture of Patent Wire
ROPE AND CABLES,**
For Inclined Planes, Suspension Bridges, Standing
Rigging, Mines, Cranes, Derrick, Tilters, &c., by
**JOHN A. ROEBLING, Civil Engineer,
TRENTON, N. J.****Doremus & Harris,
ANALYTICAL & CONSULTING CHEMISTS,
179 BROADWAY, NEW YORK.**
SCHOOL OF CHEMISTRY.**To Engineers and Surveyors.**
E. BROWN AND SON Mathematical inst. mak-
ers No. 27 Fulton Slip, New York, make and keep
for sale, Theodolites, Levelling inst., Levelling rods,
Surveyors Compasses, and Chains, Cases of Mathe-
matical drawing insts. various qualities, together with
a general assortment of Ivory Scales and small insts.
generally used by Engineers.**Ranstead, Dearborn & Co.,
MANUFACTURERS OF
LOCOMOTIVE CRANKS AND CAR AXLES,
ALSO
WROUGHT IRON SHAFTING,
And All Kinds of Hammered Shapes.**
Forge at Commercial Point, Dorchester,
Office 25 Foster's Wharf, opposite No. 211 Broad St.
BOSTON.**Henry J. Ibbotson,
IMPORTER of Sheffield and Birmingham Goods.**
Also, Agent for the Manufacture of Telegraph
Wire.
218 PEARL ST., NEW YORK.**Cumberland, (Md.) Coals for
Steaming, etc.**
ORDERS RECEIVED FOR AND FILLED
by **J. COWLES, 27 Wall St., N. Y.****Samuel D. Willmott,
MERCHANT, AND MANUFACTURER OF
CAST STEEL WARRANTED SAWS,
—AND FILES—
IMPORTER OF THE
GENUINE WICKESLY GRINDSTONES
NO. 8 LIBERTY STREET,
NEW YORK.****IRON.****Railroad Iron.**
3,000 TONS C. L. MAKE 63½ lbs. per yard,
now landing and to arrive.
Also contracts made for future delivery of above su-
perior make English Iron.
300 Tons Banks Best Iron, Round, Square and Flat.
200 " English Bar " " " "
10 " 9-16 Square Iron for Railroad Spikes.
For sale in lots to suit purchasers by
DAVID W. WETMORE.
New York, March 26, 1850. 3m**Railroad Iron.**
THE UNDERSIGNED, Agents for Manufacturers, are
prepared to contract to deliver Rails of superior
quality, and of any size or pattern, to any ports of dis-
charge in the United States.
COLLINS, VOSE & CO.,
74 South St.
New York, June 1, 1850.**Railroad Iron.**
1,500 Tons weighing 53 lbs. per lineal yard.
500 " " 57 " " "
500 " " 56 " " "
500 " " 60 & 61 lbs. "
Also 2½x½ flat rails. All the above being of approv-
ed patterns. For sale by
DAVIS, BROOKS, & CO.,
68 Broad street.
N.B.—Rails imported on commission, or at a fixed
price.**Iron.**
Pig Iron, Anthracite and Charcoal; Boiler and Flue
Iron, Spring and Bilistered Steel, Nail Rods, Best Re-
fined Bar Iron, Railroad Iron, Car Axles, Nails, Stove
Castings, Cast Iron Pipes of all sizes, Railway Chairs
of approved patterns for sale by
COLEMAN, KELTON & CAMBELL,
109 N. Water St., Philadelphia.**IRONDALE PIG METAL, MANUFACTURED**
and for sale by the Bloomsburg Railroad Iron Co.
LINDLEY FISHER, Treasurer.
75 N. Water St., Philadelphia.**Railroad Iron.**
2000 Tons, weighing 53 pounds per lineal yard,
of the most approved pattern of T rails, in
store and to arrive, for sale by
COLLINS, VOSE & CO.,
74 South St.
New York, June 1, 1850.**Railroad Iron.**
1675 Tons, weighing about 61 lbs. per yard, 90
tons, weighing about 52 lbs. per yard, and
825 tons, weighing about 53½ lbs. per yard, of the lat-
est and most approved patterns of T rail, for sale by
BOORMAN, JOHNSTON & CO.,
119 Greenwich street.
New York, Feb. 25, 1850.N.B.—B. J. & Co are also prepared to take con-
tracts for English rails, delivered in any of the Atlan-
tic ports of the United States.**Railroad Iron.**
THE UNDERSIGNED, HAVING made arrange-
ments abroad, are prepared to contract for the de-
livery of Foreign rails, of approved brands upon the
most favorable terms.They will also make contracts for American rails,
made at their Trenton works, from Andover Iron, in
whole or in part, as may be agreed upon.
They are prepared to furnish Telegraph, Spring and
Market Wire; Braziers and Wire Rods; Rivets and
Merchant Bars to order, all made exclusively from
Andover Iron. The attention of parties who require iron
of the very best quality for special purposes, is respect-
fully invited.
COOPER & HEWITT,
17 Burling Slip, New York.
February 15, 1850.**Glendon Refined Iron.**
Round Iron, Band Iron, Hoop Iron,
Square " Flat " Scroll "
Axles, Locomotive Tyres,
Manufactured at the Glendon Mills, East Boston, for
sale by **GEORGE GARDNER & CO.,**
5 Liberty Square, Boston, Mass.
Sept. 15, 1849. 3m37**PATENT HAMMERED RAILROAD, SHIP &
BOAT SPIKES.**—The Albany Iron Works
have always on hand, of their own manufacture, a
large assortment of Railroad, Ship and Boat Spikes
from 2 to 12 inches in length, and of any form of head.
From the excellence of the material always used in
their manufacture, and their very general use for rail-
roads and other purposes in this country, the manu-
facturers have no hesitation in warranting them fully
equal to the best spikes in market, both as to quality
and appearance. All orders addressed to the subscrib-
ers at the works will be promptly executed.**JOHN F. WINSLOW, Agent.**
Albany Iron and Nail Works, Troy, N. Y.
The above Spikes may be had at factory prices, of
Erastus Corning & Co Albany; Meritt & Co., New
York; E. Pratt & Brother, Baltimore, Md.**LAP—WELDED
WROUGHT IRON TUBES**FOR
TUBULAR BOILERS,
FROM ONE AND A QUARTER TO SEVEN
INCHES IN DIAMETER.THE ONLY Tubes of the same quality and man-
ufacture as those so extensively used in England,
Scotland, France and Germany, for Locomotive, Ma-
rine and other Steam Engine Boilers.
THOMAS PROSSER & SON, Patentees,
28 Platt street, New York.**Railroad Iron.**
THE UNDERSIGNED ARE PREPARED TO
contract for the delivery of English Railroad Iron
of favorite brands, during the Spring. They also re-
ceive orders for the importation of Pig, Bar, Sheet, etc.
Iron.
THOMAS B. SANDS & CO.,
73 New street,
New York.
February 3, 1849.**Iron Store.**
THE Subscribers, having the selling agency of the
following named Rolling Mills, viz: Norristown,
Rough and Ready, Kensington, Triadelphia, Potts-
grove and Thorndale, can supply Railroad Companies,
Merchants and others, at the wholesale mill prices for
bars of all sizes, sheets cut to order as large as 58 in.
diameter; Railroad Iron, domestic and foreign; Loco-
motive tire welded to given size; Chairs and Spikes;
Iron for shafting, locomotive and general machinery
purposes; Cast, Shear, Blister and Spring Steel; Boil-
er rivets; Copper; Pig Iron, etc., etc.
MORRIS, JONES & CO.,
Iron Merchants,
Schuylkill 7th and Market Sts., Philadelphia.
August 16, 1849. 1y33**Railroad Iron.**
THE MOUNT SAVAGE IRON WORKS, AL-
legany county, Maryland, having recently pass-
ed into the hands of new proprietors, are now prepar-
ed, with increased facilities, to execute orders for any
of the various patterns of Railroad Iron. Communi-
cations addressed to either of the subscribers will have
prompt attention. **J. F. WINSLOW, President**
Troy, N. Y.
ERASTUS CORNING, Albany
WARREN DELANO, Jr., N. Y.
JOHN M. FORBES, Boston.
ENOCH PRATT, Baltimore, Md.
November 6, 1848.**Railroad Iron.**
THE SUBSCRIBERS ARE PREPARED TO
take orders for Railroad Iron to be made at their
Phoenix Iron Works, situated on the Schuylkill Riv-
er, near this city, and at their Safe Harbor Iron Works,
situated in Lancaster County, on the Susquehanna
river; which two establishments are now turning out
upwards of 1800 tons of finished rails per month.
Companies desirous of contracting will be promptly
supplied with rails of any required pattern, and of the
very best quality.
REEVES, BUCK & CO.,
45 North Water St., Philadelphia.
March 15, 1849.

Monument Foundry.

A. & W. DENMEAD & SON,
Corner of North and Monument Sts.,—Baltimore,
HAVING THEIR

IRON FOUNDRY AND MACHINE SHOP

In complete operation, are prepared to execute faithfully and promptly, orders for
Locomotive or Stationary Steam Engines,
Woolen, Cotton, Flour, Rice, Sugar Grist, or Saw
Mills.

Slide, Hand or Chuck Lathes,
Machinery for cutting all kinds of Gearing.
Hydraulic, Tobacco and other Presses,
Car and Locomotive patent Ring Wheels, war-
ranted.

Bridge and Mill Castings of every description,
Gas and Water Pipes of all sizes, warranted.
Railroad Wheels with best faggotted axle, fur-
nished and fitted up for use, complete

Being provided with Heavy Lathes for Bor-
ing and Turning Screws, Cylinders, etc., we can
furnish them of any pitch, length or pattern.

Old Machinery Renewed or Repaired—and
Estimates for Work in any part of the United States
furnished at short notice.

June 8, 1849.

Iron Wire.

REFINED IRON WIRE OF ALL KINDS,
Card, Reed, Cotton-flyer, Annealed, Broom,
Buckle, and Spring Wire. Also all kinds of Round,
Flat or Oval Wire, best adapted to various machine
purposes, annealed and tempered, straightened and
cut any length, manufactured and sold by

ICHABOD WASHBURN.

Worcester, Mass., May 25, 1849.

**Wheel, Forge and Foundry
Iron.**

LOCUST GROVE Wheel Iron of great strength
and superior chilling property.

Balt. Charcoal Forge Iron, from Patuxent, Curtis
Creek and Gunpowder furnaces.

Elkridge Foundry Iron, of superior strength and
softness. Anthracite and Charcoal Iron from Penn-
sylvania and Virginia. Gas and Water Pipes, Lamp
Posts from Elkridge furnace.

LEMMON & GLENN,

6m9

62 Buchanan's Wharf, Baltimore.

**S. S. Keyser & Co.,
IRON WAREHOUSE,**

Corner of South 1 and Pratt Streets,
BALTIMORE, MD.

Selling Agents for the Rough and Ready Bar Iron
and Elk Boiler and Flue Iron Rolling Mills, Sarah
and Taylor Furnaces, and Wrightsville Hollow Ware
Foundry, and Dealers in Bar and Sheet Iron, and
Cast, Sheer, German, Blister, Spring and Electrode
Steel, etc., etc.

Smith & Tyson,

GENERAL COMMISSION MERCHANTS,
No. 25 South Charles St., Baltimore, Md.

AGENTS for the Celebrated Columbia Pig Iron,
suitable for Car Wheels and Chilled Rolls.
Columbia refined Charcoal Blooms; Refined Char-
coal Juniata Billet Iron for Wire; Refined Iron for
Bridging, of great strength; Cut Nails, Spikes, and
Brads; Railroad Spikes and Wrought Chairs. 22tf

**Stickney & Beatty,
DEALERS IN IRON AND IRON
MANUFACTURERS.**

AGENTS for the Balt. City Rolling Mill, from
which establishment they are prepared to furnish
Ellcott's round, square, and flat bar iron, puddled and
charcoal boiler plates and billet iron—also agents for
the sale of the Laurel and Maryland (Balt.) charcoal
forge pig irons, Balt. hard iron for chilling wheels, an-
ti-Easton nails, Catocin foundry iron, boiler blooms
from the Caledonian works, Wm. Jessop & Son's cast
steel, Coleman's blister steel and nail rods, hoop, band,
sheet, oval and common English iron.

Nos. 18 and 20 South Charles st., Baltimore.

Railroad Iron.

CONTRACTS made by the subscribers, agents for
the manufacturers, for the delivery of Railway
Iron, at any port in the United States, at fixed prices,
and of quality tried and approved for many years, on
the oldest railways in this country.

RAYMOND & FULLERTON, 45 Cliff st.

Iron.

THE SUBSCRIBERS having resumed the agency
of the New-Jersey Iron Company, are prepared
to execute orders for the different kinds and sizes of
Iron usually made at the works of the company, and
offer for sale on advantageous terms.—

150 tons No. 1 Boonton Foundry Pig Iron.
100 " No. 2 do. do. do.
300 " Nos. 2 & 3 Forge do. do.
100 " No. 2 Glendon do. do.
140 " Nos. 2 & 3 Lehigh Crane do do.
100 " No. 1 Pompton Charcoal do.
100 " New-Jersey Blooms
50 " New-Jersey Faggoting Iron, for shafts

Best Bars, $\frac{1}{2}$ to 4 inch by $\frac{1}{2}$ to 1 inch thick.
Do do Rounds and Squares, $\frac{1}{2}$ to 3 inch.
Rounds and Squares, 3-16 to 1 inch.
Half Rounds, $\frac{1}{2}$ to 1 in. Ovals & Half Ovals $\frac{1}{2}$ to 1 $\frac{1}{2}$ in.
Bands, $\frac{1}{2}$ to 4 inch. Hoops, $\frac{1}{2}$ to 2 inch.
Trunk Hoops, $\frac{1}{2}$ to 1 $\frac{1}{2}$ in. Horse Shoe & Nut Iron.
Nail Plates. Railroad Spikes.

DUDLEY B. FULLER & Co., 139 Greenwich-
st. and 85 Broad-st.

**WILLIAM JESSOP & SONS'
CELEBRATED CAST-STEEL.**

The subscribers have on hand, and are constantly re-
ceiving from their manufactory.

PARK WORKS, SHEFFIELD,

Double Refined Cast Steel—square, flat and octagon.
Best warranted Cast Steel—square, flat and octagon.
Best double and single Shear Steel—warranted.
Machinery Steel—round.

Best and 2d gy. Sheet Steel—for saws and other pur-
poses.

German Steel—flat and square, "W. I. & S." "Eagle"
and "Goat" stamps.

Genuine "Sykes," L. Blister Steel.
Best English Blister Steel, etc., etc., etc.

All of which are offered for sale on the most favora-
ble terms by **WM. JESSOP & SONS,**
91 John street, New York.

Also by their Agents—

Curtis & Hand, 47 Commerce street, Philadelphia.
Alex'r Fullerton & Co., 119 Milk street, Boston.

Stickney & Beatty, South Charles street, Baltimore.
May 6, 1848.

**JOHNSON, CAMMELL & Co's
Celebrated Cast Steel,**

**AND
ENGINEERING AND MACHINE FILES,**
which for quality and adaptation to mechanical uses,
have been proved superior to any in the United States.
Every description of square, octagon, flat and round
cast steel, sheet, shovel and railway spring steel, best
double and single shear steel, German steel, flat and
square, goat stamps, etc. Saw and file steel, and steel
to order for any purposes, manufactured at their Cy-
clops Steel Works Sheffield.

JOHNSON, CAMMELL & CO.,

100 William St., New York.

November 23 1849.

Railroad Iron.

THE Undersigned, Agents for Manufacturers, are
prepared to contract for the delivery of English,
Welsh and Scotch Rails, of any pattern and weight,
also for every description of English, Welsh, Scotch,
and Swedish Iron, Railway Chairs and Spikes, Riv-
ets, Bolts, Nuts, Washers, Chain Cables, Anchors,
Tin Plates, German Spelter, Iron Castings, and every
description of Machinery.

WILLIAM BIRD & CO.,
Iron and Tin Plate Merchants,
44 Wall st., New York.

And at 5 Martin's Lane, London,
and 140 Buchanan st., Glasgow.

July 27th, 1850.

**To the Proprietors of Rolling
Mills and Iron Works.**

**THE Undersigned—Proprietors of Townsend's Fur-
nace and Machine Shop, Albany—**are extensiv-
ly engaged in the manufacture of Machinery and fix-
tures for Iron, and Copper Rolling Mills, and Iron
Works. Having paid particular attention to the ma-
nufacture of *Rolls (Rollers)*, both *chilled and dry-sand*,
they feel confident that they can execute orders for
such castings in a satisfactory manner. And to give
assurance of this, they beg leave to refer to the follow-
ing named persons, proprietors and managers of some
of the most extensive rolling mills in the country, viz:
Jno. F. Winslow, J. Tuckerman, H. Burden, W. Burt,
J. & J. Rogers, Salsus & Co., J. B. Bailey, L. G. B.
Cannon, Hawkins & Atwater, etc., etc.

F. & T. TOWNSEND,
Albany, August 18, 1849.

Railroad Iron.

B. O. Railway Tires, Railway Wheels,
Scotch Pig Iron, Tin Plates and Banca Tin,
Muntz's Patent Metal Sheathing,
Baltimore Copper.

Contracts for Rails made on behalf of the manu-
facturers, for delivery at any ports in the United States,
at fixed prices.

Bowling Tires and Tire Bars and Scotch Pigs im-
ported to order.

Muntz's Ship-sheathing, and a general stock of Tin
Plates and Banca Tin in store, and for sale by
RAYMOND & FULLERTON, 45 Cliff st.

Bowling Iron. Stamped B.O.

Railway Tire Bars Rivet Iron
Locomotive and other Axles Locomotive Frame do
Boiler Plates Bars,
and every other description of this superior Iron.

The subscribers, agents for the sale of Bowling Iron,
are prepared to execute orders for importation, espe-
cially for railway and machinery uses, with despatch
from the manufacturers.

RAYMOND & FULLERTON, 45 Cliff st.

**Lovegrove's Patent Cast Iron
Water and Gas Pipes.**

THE Subscriber, the Inventor and Patentee of the
Centrifugal mode of giving form to metallic sub-
stances while in a molten state, is preparing to make
Cast Iron Water and Gas Pipes, of any dimensions,
at prices much lower than they can be made in the old
manner, and the pipes warranted to stand a pressure
of three hundred pounds to the square inch, and to be
soft enough to drill. Steam Engines and all kinds of
machinery. Cast Iron Doors and Frames, and Mill
Castings of every description, made to order.

THOMAS LOVEGROVE,

Machinist and Founder,

West Falls Avenue, below Pratt st., Baltimore.

Rosendale Cement.

**THE NEWARK AND ROSENDALE LIME
AND CEMENT CO.** are now manufacturing at
their works in NEWARK, N. J., and Ulster county,
N. Y., a very superior article of *Hydraulic Cement*—
also Lime Calcare Plaster, etc. Contractors and deal-
ers will find it to their advantage to call or make ap-
plication before purchasing elsewhere. All communi-
cations addressed to the subscriber, at Newark, N. J.,
will be punctually attended to.

1y*15

HENRY WILDE, Secretary.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES,
and Levels, with Fraunhofers Munich Glasses,
Surveyor's Compasses, Chains, Drawing Instru-
ments, Barometers, etc., all of the best quality and
workmanship, for sale at unusually low prices, by
E. & G. W. BLUNT,

No. 179 Water St., cor. Burling Slip.
New York, May 19, 1849.

**American Railway Guide,
AND POCKET COMPANION FOR THE
UNITED STATES;**

CONTAINING Correct Tables, showing the time
for starting of trains from all stations, distances,
fares, etc., on all the Railway lines in the U. States;
also many of the principal Steamboat and Stage routes
—accompanied by a complete **RAILWAY MAP.** Price,
single copies 12 $\frac{1}{2}$ cts., or \$1 per annum. Published on
the first of every month, corrected from returns fur-
nished by the Railway Superintendents throughout
the Union.

This book has been compiled somewhat on the plan
of Bradshaw's Guide, with such improvements in size,
form and arrangement as have seemed desirable; and
the publisher confidently hopes it will not be found li-
able to the objections of incompleteness and incorrect-
ness, which have been made, and justly too, against
various other similar works heretofore issued.

The subscriber having had the management of the
NEW YORK PATHFINDER almost from its com-
mencement, has enjoyed superior facilities in obtain-
ing information relating to the thoroughfares of travel,
and is therefore well-qualified to prosecute with suc-
cess the arduous undertaking of furnishing a complete
and correct national guide book.

STRINGER & TOWNSEND, General Agents,
222 Broadway: and sold also by Booksellers and Peri-
odical Dealers generally throughout the country; also
on all the Railways and Steamboats.

CURRAN DINSMORE, Publisher.

N. Y. Pathfinder Office,
139 Fulton St., New York City.

FARMERS! ATTENTION!!

John Mayher & Co's

NEW AGRICULTURAL WAREHOUSE
AND SEED STORE.

197 WATER STREET, NEW YORK.

Where they have for Sale, the largest and most complete assortment of Farming Implements, ever offered for sale in this city—all of which they will sell 10 per cent. Cheaper than the same kind of Goods can be bought at any other house in the city. Our Goods are all Warranted to give satisfaction.

FARMERS wanting to purchase, will please call and examine our Stock before buying elsewhere.

Among our assortment may be found the Celebrated Highest Premium Eagle Ploughs! together with all the most approved Ploughs now in use.

Also,—Horse Powers, Threshing Machines, Fan Mills, Corn Shellers, Straw Cutters, Corn Mills, Seed Sowers, Churns, Ox Yokes, Ox Scrapers, Hay Rakes, Horse Rakes, Patent Chain Pump (that never freezes nor rusts), and other Pumps; in fact we have everything for Farming Purposes—together with Guano, Bone Dust and other Fertilizers.

JOHN MAYHER & CO.,
197 Water st., N. Y.

February 9, 1850.

N.B.—J. M. & Co. also continue their Old Stand, at 195 Front street, near Fulton Market.

RAILROAD CAR AND COACH TRIMMINGS.

Doremus & Nixon,
IMPORTERS AND FURNISHERS

HAVE FOR SALE

Plain Garnet Plush. Fig. Garnet Plush (Butterfly pat.
"Crimson" "Crimson" (Elegant.
"Scarlet" " " (Gen. Taylor.

BROCADELLES.

Crimson Silk Brocades. Gold and Maroon do.
Gold and Blue " " Brown "
Silk and Wool " of every color.

MOQUETTES,

Of elegant designs and colors.

GERMAN CLOTH FOR CAR LININGS.

The most beautiful goods ever shown in this country, and the subscribers are the sole agents for the sale of them.

Oil cloths Enamelled with Gold. } These goods can be
" " Silver. } furnished in any
Do. Silver ground velvet printed. } dimensions req'd.

CURLED HAIR

Of every description and quality.

JNO. W. A. STRICKLAND, Agent.
New York, 1850. 1y16

FOWLER M. RAY'S Patent India-rubber Railroad CAR SPRING.

New York and Erie Railroad Shops.
Piermont, March 26, 1850.

This will certify that from practical experience in the use of Fowler M. Ray's India rubber Car Springs, I believe them to be far superior to any others now in use.

I have never known them to be affected by any change of temperature, as other Rubber Springs have been affected on this road.

I am at the present time, repairing a Passenger Car that Mr. Ray and myself mounted with his springs about two years and eight months since.

The springs are at the present time as perfect, to all appearances, as when first applied to the car.

Respectfully yours,

HORACE B. GARDNER,
Foreman of the Car Shops.

Supt. Office N.Y. & H. R.R., }
New York, March 8, 1850. }

This is to certify that we have used the Rubber Springs manufactured by Mr. F. M. Ray for the past twenty months, "both for Passenger and Freight Car Springs and Bumpers, and of different sizes," and have in every case given entire satisfaction, and I consider them the best spring now in use.

M. SLOAT, Supt.

Boston, March 5, 1850.

In answer to your enquiry about India-rubber Springs, I have to say that we have used them to a considerable extent on both freight and passenger cars, and also on several of our tenders; and I am very well satisfied that they answer all the purposes for which they are intended. I believe the India-rubber will soon supersede all other springs for cars and tenders.

Yours truly, **S. M. FELTON,**

Supt. Fitchburg Railroad.

Office New Jersey Railroad Co., }
Jersey City, March 8, 1850. }

FOWLER M. RAY, Esq.,

Dear Sir: In answer to your enquiries respecting the operation of the Vulcanised Rubber Springs, purchased by our company from you some two years since, I reply that they are superior to any spring in use, (that I have either seen or heard of).

The improved form of your spring, consisting of a solid piece of vulcanised rubber with bands on the outside, is far superior to your first form, consisting of disks of rubber with metallic plates interposed.

The last named form was tried, if you recollect, at a much earlier period; and then was replaced by your last form.

I have no hesitation in saying that your springs have given entire satisfaction, and most cheerfully recommend them to railroad companies throughout the country for the following reasons:

1st. The cost is 30 per cent. less.

2d. Saving of weight on each car of 8 wheels from 700 to 800 lbs.

3d. Less care and attention is required, as they are not liable to get out of repair.

4th. A great saving is secured in the wear and tear of the cars and rails from their great elasticity.

5th. The freedom from noise.

6th. There is greater safety in case of accident, as they cannot be broken.

7th. The comfort of passengers is enhanced sufficiently to pay the expense, waiving all the other reasons that I have given.

Should this fail to satisfy any person enquiring, you are at liberty to refer to me, No. 150 Washington St., Jersey City. Yours respectfully,

T. L. SMITH, Supt.

New York, March 11, 1850.

I have used the Patent India-rubber Spring purchased of Mr. Ray, upon the cars of the New York and New Haven Railroad, and have found them efficient and economical; and when applied to the axles and draw springs, believe them to be quite equal to any in use. I have found a combination of these springs with a steel spring under the transom beam a very satisfactory arrangement, and am now using this plan in all new cars.

Yours respectfully,

ROBERT SCHUYLER.

February 25, 1850.

From practical observation of the use of the India-rubber Car Springs, manufactured and sold by your company, we are entirely satisfied in their application, and do not hesitate to recommend them as elastic, durable, requiring no repairs for years, and retaining their consistency during all extremes of weather. We have applied them for the past two years, and consider them superior for all railroad purposes.

Yours truly,

OSGOOD BRADLEY, Car Builder, Worcester.
T. & C. WASON, do. Springfield.
DEAN, PACKARD & MILLS, do. do.
DAVENPORT & BRIDGES, do. Cambridgeport.

Office of the New Jersey Railroad Co., }
Jersey City, March 7, 1850. }

This is to certify that we have had Mr. F. M. Ray's India-rubber Springs in constant use under our cars, and as Bumper Springs for upwards of two years, and they have in every way given perfect satisfaction.

The present form of spring we deem far superior to the form of Disk, having used both forms, although we have none of those made in Disks at present in use.

We take pleasure in recommending these springs to all railroad companies.

J. P. JACKSON, Vice Prest.
New Jersey Railroad and Trans. Co.

Roxbury, February 28, 1850.

In compliance with your request, I take great pleasure in stating the result of my experience in the use of "Ray's Patented Vulcanised India-rubber Car and Engine Springs." We have used them nearly two years, and never had one fail in any way. The cold weather does not affect them, as it has other rubber springs we have used.

With sixteen years' experience as superintendent of machinery on the Boston and Providence railroad, I take pleasure in saying that your springs are the best we ever used, or I ever saw used elsewhere. We have 20 cars rigged with them, of which I can say that the springs are as good now as when first applied. I put 24 lbs. of the rubber under the forward end of one of our heaviest engines, taking off 250 lbs. of steel springs—it has been in use 18 months, and is in as good condition now as when first put under the engine.

Very respectfully yours,

GEO. S. GRIGGS,
Supt. of Machinery, Boston and Prov. R.R.

Fall River, February 2, 1850.

In answer to yours of the 20th ult. I would say that this company has for some 10 or 12 months past been using "Ray's India-rubber Springs." We have applied them to both passenger and freight cars with uniform success. They have invariably preserved their elasticity and consistency through all the extremes of weather; and we are now applying them whenever the steel spring fails. I am well satisfied that they are particularly adapted for railroad purposes.

Very respectfully yours,

GEO. HAVEN,
Supt. Fall River Railroad.

Jersey City, March 9, 1850.

This is to certify that the present form of Mr. F. M. Ray's India-rubber Car Spring I consider far superior to the form of Disk, having used both forms.

I take pleasure in recommending these springs to all railroad companies. **DAVID H. BAKER,**
Foreman of Car Shop of N.J. R.R. & Trans. Co.

Harlem R.R. Depot, }
New York, March 7, 1850. }

This is to certify that we have used Mr. F. M. Ray's India-rubber Springs for over eighteen months, and find them to be easy and durable, and recommend them to railroad companies as being superior to anything we have tried.

J. M. SMART,

Foreman at 42d St. Depot.

Old Colony Railroad Office,
Boston, March 6, 1850.

EDWARD CRANE, Esq.,

President New England Car Co.,

Dear Sir: In compliance with your request I would state that the Old Colony Railroad Comp'y have had in use upon their road, India-rubber Springs furnished by your company, for more than eighteen months past, during which time they have been extensively used under Passenger and Freight Cars, Locomotive Tenders, and for Drawer and Buffering Springs, with the most perfect success. The elasticity and consistency of the Rubber has never been unfavorably affected by either extremes of heat or cold—and from the experience which we have had in the use of Rubber Springs, I think them well adapted for railroad purposes—and therefore we have for some months past used Rubber almost exclusively, in all places where springs are required.

Respectfully yours, etc.,

JAS. H. MOORE,
Supt. O. C. Road.

Troy, February 27, 1850.

We have been using your India-rubber Car Springs for nearly two years—and we take pleasure in saying that in our opinion the rubber has to a certain extent already, and may eventually entirely supersede all other Springs for Railroad Car purposes. We now use it entirely for Draw Springs and Bumpers, considering it better and lighter than steel.

During our two years' experience in the use of it, we have not known any to lose their elasticity, or fail in any way; and we cheerfully recommend the rubber for railroad car springs. Very respectfully,

EATON, GILBERT & CO.

Passenger Car Linings.

THE Advertiser continues to make to order the Enamelled Car Linings which have been so highly approved the last three years, and are now exclusively used by all the Northern Railroads. No pains are spared to get out new styles, and adapt them to the tastes of every consumer.

Orders addressed to **CHARLES STODDER, No. 75 Kilby street, Boston,** will have prompt attention. March 23, 1850. 2m

India-rubber for Railroad Cos.

RUBBER SPRINGS—Bearing and Buffer—Fowler's Patent—Hose from 1 to 12 inches diameter. Suction Hose. Steam Packing—from 1-16 to 2 in. thick. Rubber and Gutta Percha Bands. These articles are all warranted to give satisfaction, made under Tyer & Helm's patent, issued January, 1849.—No lead used in the composition. Will stand much higher heat than that called "Goodyear's," and is in all respects better than any in use. Proprietors of railroads do not be overcharged by pretenders.

HORACE H. DAY,

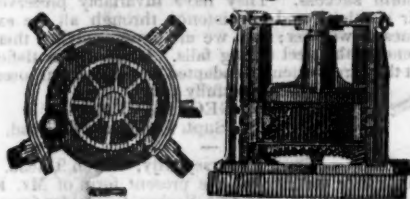
Warehouse 23 Courtland street.
New York, May 21, 1849.

Spikes, Spikes, Spikes.

ANY person wishing a simple and effective Spike Machine, or a number of them, may be supplied by addressing **J. W. FLACK,**
March 6, 1850. 2m

MACHINERY.

Henry Burden's Patent Revolving Shingling Machine.



THE Subscriber having recently purchased the right of this machine for the United States, now offers to make transfers of the right to run said machine, or sell to those who may be desirous to purchase the right for one or more of the States.

This machine is now in successful operation in ten or twelve iron works in and about the vicinity of Pittsburgh, also at Phoenixville and Reading, Pa., Covington Iron Works, Md., Troy Rolling Mills, and Troy Iron and Nail Factory, Troy, N. Y., where it has given universal satisfaction.

Its advantages over the ordinary Forge Hammer are numerous: considerable saving in first cost; saving in power; the entire saving of shingler's, or hammerman's wages, as no attendance whatever is necessary, it being entirely self-acting; saving in time from the quantity of work done, as one machine is capable of working the iron from sixty puddling furnaces; saving of waste, as nothing but the scoria is thrown off, and that most effectually; saving of staffs, as none are used or required. The time required to furnish a bloom being only about six seconds, the scoria has no time to set, consequently is got rid of much easier than when allowed to congeal as under the hammer. The iron being discharged from the machine so hot, rolls better and is much easier on the rollers and machinery. The bars roll sounder, and are much better finished. The subscriber feels confident that persons who will examine for themselves the machinery in operation, will find it possesses more advantages than have been enumerated. For further particulars address the subscriber at Troy, N. Y.

P. A. BURDEN.

Railroad Spikes and Wrought Iron Fastenings.

THE TROY IRON AND NAIL FACTORY, exclusive owner of all Henry Burden's Patented Machinery for making Spikes, have facilities for manufacturing large quantities upon short notice, and of a quality unsurpassed.

Wrought Iron Chairs, Clamps, Keys and Bolts for Railroad fastenings, also made to order. A full assortment of Ship and Boat Spikes always on hand.

All orders addressed to the Agent at the Factory will receive immediate attention.

P. A. BURDEN, Agent,
Troy Iron and Nail Factory, Troy, N. Y.

CHILLED RAILROAD WHEELS.—THE UNDERSIGNED are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of spokes or discs, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St., below 13th,
Philadelphia, Pa.

Brown's Old Established SCALE WARE HOUSE,

NO. 234 WATER ST., NEW YORK.

THE Subscriber, Practical Manufacturer of Scales of every description, respectfully asks the attention of Railroad Companies to his Improved Wrought Iron Railroad Track and Depot Scales which for strength, durability, accuracy, convenience in weighing, and beauty of workmanship, are not surpassed by any others in this country.

He is aware that this is rather a bold assertion for him to make, yet he can say with confidence that they have but to be tried to give them precedence over all others.

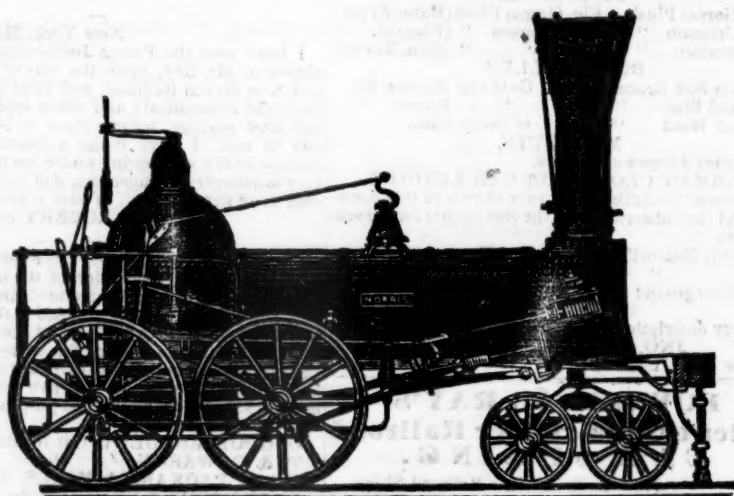
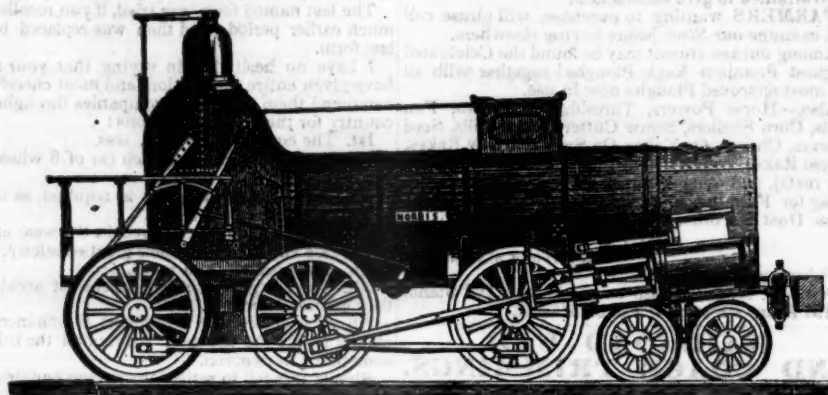
J. L. BROWN.

Bank Scales made to order, and all Scales of his make Warranted in every particular.

References given if required

NORRIS' LOCOMOTIVE WORKS.

BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA.



THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size. Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Wrought Iron Tyres made of any required size—the exact diameter of the Wheel Centre, being given, the Tyres are made to fit on same without the necessity of turning out inside.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS, BROTHERS

PATENT MACHINE MADE HORSE-SHOES.

The Troy Iron and Nail Factory have always on hand a general assortment of Horse Shoes, made from Refined American Iron.

Four sizes being made, it will be well for those ordering to remember that the size of the shoe increases as the numbers—No. 1 being the smallest.

P. A. BURDEN, Agent,
Troy Iron and Nail Factory, Troy, N. Y.

Etna Safety Fuse.

THIS superior article for igniting the charge in wet or dry blasting, made with DUPONT'S best powder, is kept for sale at the office and depot of

REYNOLDS & BROTHER,

Sole Manufacturers, 41

No. 35 Liberty St.

NEW YORK.

And in the principal cities and towns in the U. States. The Premium of the AMERICAN INSTITUTE was awarded to the Etna Safety Fuse at the late Fair held in this city.

November 3, 1849.

1y

COLUMBUS, OHIO,

Railroad Car Manufactory. RIDGWAYS & KIMBALL,

HAVE established at this central point, the manufacture of Passenger, Freight, Gravel and Hand Cars for Railroads, and assure all Western Railroad Companies that it will be their constant aim to procure the best materials and workmen, and to turn out the best kind of work at fair prices. Specimens may be seen on the Columbus and Xenia Railroad. The patronage of Railroad Companies is respectfully solicited.

1y8

To Inventors and Patentees.

OWEN G. WARREN, ARCHITECT, Has had many years' experience as Agent for obtaining Patents, both in this country and Europe, and will transact such business promptly and reasonably. Persons at a distance can have their business done by correspondence—without the necessity of visiting this city or Washington. Office No. 94 Merchants Exchange, Wall st., corner of Hanover st., up stairs.

1y3

Mr. Hale:—"The New England Car Co., having been engaged for the last six months in introducing the Vulcanized India-rubber Car Springs upon the different railroads in this and other states, and having in particular introduced it upon the Boston and Worcester railroad with perfect success, were much gratified to find, by your paper of this morning, that the article had given satisfaction to the president of that corporation, and the terms of just commendation in which you were pleased to speak of it. But their gratification was scarcely equalled by their surprise, when, or arriving at the close of your paragraph, they found the results of all their labors attributed to a foreign source, with which the New England Car Co. has no connection. The material used on the Boston and Worcester railroad, and all the other railroads in this country, where any preparation of India-rubber has been successfully applied, is entirely an American invention, patented in the year 1844 to Charles Good-year, of New Haven, Conn., and the application of it to this purpose and the form in which it is applied are the invention of F. M. Ray of New York. The only material now in use, and so far as has yet appeared, the only preparation of India rubber capable of answering the purpose, has been furnished under these patents by the New England Car Company, manufactured under the immediate inspection of their own agent. If any other should be produced, the right to use it would depend upon the question of its interference with Mr. Goodyear's patent. The New England Car Company have their place of business in this city at No. 99 State street, and are prepared to answer all orders for the Vulcanized India rubber Car Springs, of the same quality and of the same manufacture as those which they have already placed on your road, and most of the other roads terminating in this city."

And yet Mr. Knevit is using these experiments made upon the Springs of the Car Company to induce the public to purchase his springs, and is attempting to impose upon them the belief that the springs used were furnished by him! We ask whether such a course is honorable, or entitles his statements to much consideration from the public.

The above Springs are for sale 98 Broadway, New York, and 99 State street, Boston.

EDWARD CRANE Agent, Boston.

F. M. RAY, Agent, New York.

Boston, May 8, 1849.

STABILITY—SECURITY—PERPETUITY. Mutual Life Insurance Co. of New York.

No. 35 WALL STREET.
A MILLION OF DOLLARS

Securely invested in Bonds and Mortgages on real estate in this city and Brooklyn, and stocks of the State and City of New York and United States Government.

The company declared a dividend of profits of fifty-two per cent. on all existing policies on the 31st of January, 1848.

All the Profits are Divided Among the Insured. Persons may effect insurance on their own lives and the lives of others.

A married woman can insure the life of her husband, the benefits of which are secured by law for the exclusive use of herself or children.

Clergymen and all others dependent upon salaries or their daily earnings are specially invited to avail themselves of a resource whereby their surviving families may be secured from the evils of penury.

Pamphlets explanatory of the principles of Mutual Life Insurance, and illustrating its advantages, with forms of application, may be obtained at the office of the company, 35 Wall street, or of any of its agents.

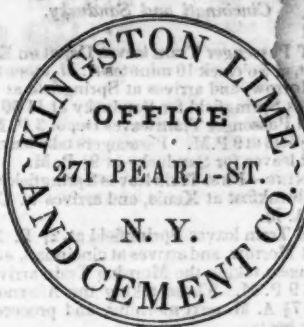
TRUSTEES.

Jos. B. Collins, Abraham Bininger,
Wm. J. Hyslop, Alfred Edwards,
R. H. McCurdy, Wm. Betts,
Fred. S. Winston, Joseph Blunt,
C. W. Faber, Isaac G. Pearson,
John P. Yelverton, Henry Wells,
Theo. Sedgwick, Wm. Moore,
Stacy B. Collins, George R. Clark,
John H. Swift, Jona. Miller,
John Wadsworth, David A. Comstock,
S. M. Cornell, Robert Schuyler,
Gouv. M. Wilkins, James Chambers,
John V. L. Pruyn, Joseph Tuckerman,
Jas. S. Wadsworth, Moses H. Grinnell,
Charles Ely, Wm. J. Banker,
John C. Cruger, John M. Stuart,
Charles King, Francis S. Lathrop,
Alfred Pell, Nathaniel Hayden.

JOSEPH B. COLLINS, President.
ISAAC ABBATT, Secretary.

3m9

Hydraulic Cement.



HYDRAULIC CEMENT, OF BEST QUALITY, manufactured at their works, for sale in lots to suit purchasers.

Also, Ground Lime, a superior article for Builders. ISAAC FRYER, Sec'y.

January 19, 1850.

Engine and Car Works, PORTLAND, MAINE.

THE PORTLAND COMPANY, Incorporated August 8th, 1846, with a capital of \$250,000, have erected their extensive Works upon the deep water of Portland Harbor, and receive and transport, to and from their works direct, to and from vessels of any class.

They now manufacture to order, and deliver upon the Railroads running in each direction from the city, or on shipboard as wanted, Locomotive, Stationary, or Steam Boat Engines; Passenger, Mail, Freight, Earth and Hand Cars; Railway Frogs, Switches, Chairs and Castings; and every other description of Machinery.

HORACE FELTON,
Superintendent.

JAMES C. CHURCHILL,
General Agent and Clerk.

RAILROADS.

EASTERN RAILROAD.

SUMMER ARRANGEMENT.

On and after Monday, June 17th, 1850, trains will leave Boston daily (Sundays excepted);
For Lynn, 7, 9 $\frac{1}{2}$, 11 a.m., 12 m., 2 $\frac{1}{2}$, 4 $\frac{1}{2}$, 5, 6, 7 p.m.
Salem, 7, 9 $\frac{1}{2}$, 11 a.m., 12 m., 2 $\frac{1}{2}$, 3 $\frac{1}{2}$, 4 $\frac{1}{2}$, 6, 7 p.m.
Manchester and Gloucester, 9 $\frac{1}{2}$ a.m., 3, 6 p.m.
Marblehead, 7, 9 $\frac{1}{2}$, 12 a.m., 2 $\frac{1}{2}$, 4 $\frac{1}{2}$, 6, 7 p.m.
Ipswich, 7, 11, 12 a.m., 2 $\frac{1}{2}$, 4 $\frac{1}{2}$, 7 p.m.
Newburyport, 7, 11, 12 a.m., 2 $\frac{1}{2}$, 4 $\frac{1}{2}$, 7 p.m.
Portsmouth, 7, 11 a.m., 4 $\frac{1}{2}$ p.m.
Portland, Me., 7, 11 a.m., 4 $\frac{1}{2}$ p.m.

And for Boston,

From Portland, 5, 10 $\frac{1}{2}$ a.m., 5 p.m.
Portsmouth, 7 $\frac{1}{2}$ a.m., 1, 7 $\frac{1}{2}$ p.m.
Newburyport, 6 $\frac{1}{2}$, 8 $\frac{1}{2}$, 11 $\frac{1}{2}$ a.m., 1 $\frac{1}{2}$, 5, 8 p.m.
Ipswich, 7-40, 8-35, 11-42 a.m., 2-20, 5-22, 8 $\frac{1}{2}$ p.m.
Gloucester, 7 $\frac{1}{2}$ a.m., 1 $\frac{1}{2}$, 8 p.m.
Manchester, 7 a.m., 2 p.m.
Salem, 6 $\frac{1}{2}$, 7 $\frac{1}{2}$, 8 $\frac{1}{2}$, 9 $\frac{1}{2}$, 10 $\frac{1}{2}$ a.m., 12 $\frac{1}{2}$, 2 $\frac{1}{2}$, 3 $\frac{1}{2}$, 6 $\frac{1}{2}$, 9 $\frac{1}{2}$ p.m.
Lynn, 6 $\frac{1}{2}$, 7 $\frac{1}{2}$, 8 $\frac{1}{2}$, 9 $\frac{1}{2}$, 10 $\frac{1}{2}$ a.m., 12 $\frac{1}{2}$, 2 $\frac{1}{2}$, 3 $\frac{1}{2}$, 6 $\frac{1}{2}$, 9 $\frac{1}{2}$ p.m.

* Or on their arrival from the East.
Freight trains each way daily. Office 17 Merchants' Row, Boston.

JOHN KINSMAN, Superintendent.

ALBANY AND BUFFALO RAILROADS.

Four Trains daily, Sundays excepted, viz:
Leave Albany, 6 a.m., 9 a.m., 2 p.m., 7 p.m.
Reach Buffalo, 15 hours, 18 hours, 23 hours, 18 hours.
Arrive from Buffalo, 7 p.m., 2 $\frac{1}{2}$ a.m., 12 $\frac{1}{2}$ m., 3 $\frac{1}{2}$ p.m.

Passengers by the Express Train reach Buffalo from New York, and New York from Buffalo, in 24 hours. The Isaac Newton and Oregon connect at Albany with this Train. Baggage cars, with careful baggage masters, run through with all the trains.

For Schenectady, Saratoga Springs & Whitehall, Leave Albany at 7 a.m. and 2 p.m. For Schenectady only at 6, 7 and 9 a.m. and 12 $\frac{1}{2}$, 2 and 7 p.m. For Erie Canal packets at 7 a.m. and 7 p.m. By Plank Road from Schenectady to Saratoga at all hours by stages, etc.

The Eastern Trains leave Albany at 7 a.m. and 3 p.m. The wagons of the company take baggage free between railroads and steamboats at Albany.

E. FOSTER, Jr., Sec'y
Albany and Schenectady Railroad Co.

Albany, August, 1849.

BOSTON AND MAINE RAILROAD.

Summer Arrangement, 1850.

Outward Trains from Boston

For Portland at 7, 11, a.m. and 4 $\frac{1}{2}$ p.m.
For Great Falls at 7, 11, a.m., 4 $\frac{1}{2}$ p.m.
For Haverhill at 7, 9, 11 a.m., 2 $\frac{1}{2}$, 4 $\frac{1}{2}$, 6 $\frac{1}{2}$ p.m.
For Lawrence (South Side) 7, 11 a.m., 2 $\frac{1}{2}$, 4 $\frac{1}{2}$ p.m.
" (North ") 7 $\frac{1}{2}$, 9, a.m., 12m., 5, 6 $\frac{1}{2}$ p.m.

For Reading 7, 9, 11 a.m., 12m., 2 $\frac{1}{2}$, 4 $\frac{1}{2}$, 5, 6 $\frac{1}{2}$, 7 $\frac{1}{2}$, 9 $\frac{1}{2}$ p.m.
The Station in Boston is on Haymarket Square.

THOS. S. WILLIAMS, Super't.

July 1, 1850.

NEW YORK AND HARLEM RAILROAD. NEW ARRANGEMENT.

On and after Wednesday, October 17th, 1849, the Cars will run as follows, (Sundays excepted) until further notice:

Trains will leave the City Hall, New York, for—
Harlem and Morrisania at 6 $\frac{1}{2}$, 8, 10, 11, 12 a.m., 2, 3 $\frac{1}{2}$, 4, 5, 6 $\frac{1}{2}$ p.m.
New Village, at 8 $\frac{1}{2}$, 10, 12 a.m., 2 $\frac{1}{2}$, 5, 6 $\frac{1}{2}$ p.m.
Fordham and Williams' Bridge, at 8 $\frac{1}{2}$, 10, 12 a.m., 2 $\frac{1}{2}$, 3 $\frac{1}{2}$, 5, 6 $\frac{1}{2}$ p.m.
Hunt's Bridge, Underhill's and Hart's Corners, at 8 $\frac{1}{2}$, 10 a.m., 3 $\frac{1}{2}$, 5 p.m.
Tuckahoe and White Plains, at 8 $\frac{1}{2}$, 10 a.m., 2 $\frac{1}{2}$, 3 $\frac{1}{2}$, 5 p.m.

Pleasantville, New Castle, Bedford, Mechanicsville, Purdy's, Croton Falls, and intermediate stations, on signal, 8 $\frac{1}{2}$ a.m., 2 $\frac{1}{2}$, 3 $\frac{1}{2}$ p.m.

Brewster's, Towner's, Patterson, Paulding's, South Dover, Dover Furnace, and Dover Plains, 8 $\frac{1}{2}$ a.m., 2 $\frac{1}{2}$ p.m.

NOTICE—Passengers are reminded of the great danger of standing upon the platform of the cars, and hereby notified that the practice is contrary to the rules of the Company, and that they do not admit any responsibility for injury sustained by any passenger upon the platforms, in case of accident.

Returning to New York will leave

Harlem and Morrisiana at 6 08, 7 $\frac{1}{2}$, 8 37, 9, 10 6, 12 a.m., 1 43, 3 07, 3 $\frac{1}{2}$, 5, 5 47 p.m.
New Village, at 5 58, 8 27, 9 56 a.m., 1 33, 2 57, 5 36 p.m.

Fordham and William's Bridge at 5 $\frac{1}{2}$, 8 14, 9 43, 10 57 a.m., 1 20, 2 44, 5 24 p.m.

Hunt's Bridge at 8 04, 9 33 a.m., 2 34, 5 16 p.m. On signal.

Underhill's, at 7 56, 9 23 a.m., 2 26, 5 10 p.m. On signal.

Tuckahoe at 7 53, 9 18, 10 40 a.m., 2 23, 5 08 p.m.

Hart's Corners at 7 38, 9 03 a.m., 2 08, 4 54 p.m.—On signal.

White Plains at 7 $\frac{1}{2}$, 8 55, 10 20 a.m., 2, 4 47 p.m.

Davis' Brook at 8 40, 10 11 a.m., On signal. 4 39 p.m. On signal.

Unionville, 8 27, 10 11 a.m. On signal. 4 29 p.m.—On signal.

Pleasantville at 8 20, 9 56 a.m., 4 24 p.m.

Champana, at 8 10, 9 50 a.m. On signal. 4 18 p.m. On signal.

New Castle, at 7 56, 9 38 a.m., 4 07 p.m.

Bedford at 7 46, 9 32 a.m., 4 02 p.m.

Mechanicsville at 7 36, 9 22 a.m., 3 52 p.m.

Golden's Bridge, 7 28, 9 17 a.m. On signal, 3 47 p.m. On signal.

Purdy's at 7 20, 9 09 a.m., 3 39 p.m.

Croton Falls, at 7 $\frac{1}{2}$, 9 04 a.m., 3 34 p.m.

Brewster's, at 8 50 a.m., 3 20 p.m.

Towner's, at 8 35 a.m., 3 05 p.m.

Patterson, at 8 27 a.m., 2 57 p.m.

Paulding's, at 8 17 a.m., 2 47 p.m.

South Dover, 8 02 a.m., 2 32 p.m.

Dover Furnace, 7 55 a.m., 2 25 p.m.

Dover Plains, at 7 45 a.m., 2 15 p.m.

The trains for Harlem and Morrisiana leaving City Hall at 6 $\frac{1}{2}$, 8, 10, 11, 12, 2, 4 and 6 $\frac{1}{2}$, returning from Morrisiana and Harlem at 6 08, 7 $\frac{1}{2}$, 9, 12, 1 43, 3 07, 3 $\frac{1}{2}$ and 5 o'clock, will land and receive passengers at 27th, 42d, 51st, 61st, 79th, 86th, 109th, 115th, 125th and 132d streets.

The Dover Plains train from New York at 2 $\frac{1}{2}$ p.m., returning leaving Dover Plains at 7 $\frac{1}{2}$ a.m., will not stop between White Plains and New York, (except at Tuckahoe, Williams' Bridge and Fordham,) unless to leave passengers coming from above Croton Falls.

A car will precede each train ten minutes to take up passengers in the city. The last car will not stop, except at Broome st. and 27th street.

Freight Trains leave New York at 1 o'clock p.m.—Returning, leaves Dover Plains at 12 o'clock m.

For Sunday Arrangements, see hand bills.
M. SLOAT, Sup't.

FAIRBANKS' RAILROAD SCALES.—THE subscribers are prepared to construct at short notice, *Railroad and Depot Scales*, of any desired length and capacity. Their long experience as manufacturers—their improvements in the construction of the various modifications, having reference to strength, durability, retention of adjustment, accuracy of weight and dispatch in weighing—and the long and severe tests to which their scales have been subjected—combine to ensure for these scales the universal confidence of the public.

No other scales are so extensively used upon railroads, either in the United States or Great Britain; and the managers refer with confidence to the following in the United States.

Eastern Railroad.	Boston & Maine Railroad.
Providence Railroad.	Providence and Wor. Road.
Western Railroad.	Concord Railroad.
Old Colony Railroad.	Fitchburg Railroad.
Schenectady Railroad.	Syracuse and Utica Road.
Balt. and Ohio Railroad.	Baltimore and Susq. Road.
Phila. & Reading Road.	Schuylkill Valley Road.
Central (Ga.) Railroad.	Macon and Western Road.
	New York and Erie Railroad.

And other principal Railroads in the Western, Middle and Southern States.

E. & T. FAIRBANKS & CO.

St. Johnsbury, Vt.

Agents, } FAIRBANKS & Co., 89 Water St., N. York.
A. B. NORRIS, 196 Market St. Philadelphia.
April 22, 1849. ly*17

NOTICE TO

Superintendents of Railroads.

TYLER'S PATENT SAFETY SWITCH.—The undersigned would respectfully call their attention to his Patent Safety Switch, which from long trial and late severe tests has proved itself perfectly reliable for the purpose for which it was intended. It is designed to prevent the train from running off when the switch is set to the wrong track by design or accident. The single rail or gate switch is established as the best and safest switch for the ordinary purpose of shifting cars from one track to another, but it is liable to the serious evil of having one track open or broken when connected with the other. My improvement entirely removes this evil, and while it accomplishes this important office, leaves the switch in its original simplicity and perfection of a plain unbroken rail, connecting one track with the other ready for use.

The following decision of the Commissioner of Patents is respectfully submitted to Railroad Engineers, Superintendents, and all others interested in the subject.

(COPY.)

UNITED STATES PATENT OFFICE,

Washington City, D.C., April 28th, 1846.

SIR: You are hereby informed that in the case of the interference between your claims and those of Gustavus A. Nicolls, for improvements in safety switches—upon which a hearing was appointed to take place on the 3d Monday in March, 1846, the question of priority of invention has been decided in your favor. Inclosed is a copy of the decision. The testimony in the case is now open to the inspection of those concerned.

Yours respectfully, EDMUND BURKE,
Commissioner of Patents.

To Philip B. Tyler.

Any further information may be obtained by addressing P. B. TYLER, Springfield, Mass., or JOHN PENNILETON, Agent, 149 Hudson St., New York.

**NORRIS' LOCOMOTIVE WORKS,
SCHENECTADY, N. Y.**

THESE Works are in full operation in Manufacturing to order, Locomotive Steam Engines & Tenders, of the best principle and construction of material, using wrought iron heavy frames with pedestals welded thereto, and all parts of the engine made of the best wrought iron, except cylinders, pumps and boxes—obtaining greater durability, and carrying less weight over the road, than engines constructed of cast iron. Wrought Iron Tires made any required size, and The Bars bent and welded with dispatch. Chilled Wheels for Cars, Trucks and Tenders, made from the toughest iron.

Driving and Tender and Car Wheels fitted to Axles with Brass Boxes and Springs, and Railroad Machinery generally. Manufactured and for sale by
April 11, 1849. E. S. NORRIS.

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.
Jan. 20, 1849.

CENTRAL RAILROAD FROM SAVANNAH TO MACON, (Ga.) 190 1/2 miles.

Passenger Trains leave Savannah and Macon daily at 7 a.m. Passenger trains arrive daily at Savannah, 6 15 p.m. Macon, 6 45 p.m.

This road, in connection with the Macon and Western road from Macon to Atlanta, and the Western and Atlantic road from Atlanta to Dalton, now forms a continuous line of 391 1/2 miles in length* from Savannah to Dalton, Murray county, Ga. and with the Memphis Branch railroad, and Stages connect with the following places:

Tickets from Savannah to Macon,	\$5 75
" " " Atlanta,	9 50
" " " Augusta,	6 50
" " " Columbus,	15 00
" " " Opelika,†	17 00
" " " Jacksonville, Ala.,	20 00
" " " Talladega,	
" " " Huntsville } Ala.,	22 00
" " " Decatur,	
" " " Tusculum, Ala.,	22 50
" " " Tuscaloosa, Ala.,	
" " " Columbus, Miss.,	23 00
" " " Aberdeen, "	
" " " Holly Springs,	
" " " Nashville, Tenn.,	
" " " Murphreesboro',	25 00
" " " Columbia, do.,	
" " " Memphis, do.,	30 00

An extra Passenger Train leaves Savannah on Saturdays, after the arrival of the Steamships from New York, for Macon, and connects with the Macon and Western railroad; and on Tuesdays, after the arrival of the Macon and Western cars, an extra Passenger Train leaves Macon to connect with the Steam ships for New York.

Stages for Tallahassee and intermediate places connect with the road at Macon, Mondays, Wednesdays, and Fridays, and with Milledgeville at Gordon daily.

Passengers for Montgomery, Mobile and New Orleans take stage for Opelika from Barnesville through Columbus, a distance of 97 miles, or from Griffin through West Point, a distance of 93 miles.

* The Western and Atlantic railroad will soon be completed between Dalton and Chattanooga, a distance of 423 1/2 miles from Savannah, of which due notice will be given.

† Head of the West Point and Montgomery railroad, on which the fare to Montgomery is about \$2.

**RATES OF FREIGHT FOR MERCHANDISE GENERALLY,
FROM SAVANNAH TO MACON.**

Measurement Goods.—Boxes of hats, bonnets, furniture, shoes, saddlery, dry-goods, and other measurement goods, per cubic foot - 13 cents.
Crockery Ware, in crates, boxes or hhds, per cubic foot. - 10 "
Goods by Weight, 1st class.—Boxes of glass, paints, drugs & confectionary, per 100 lbs., 50 "
2d class.—Sugar, coffee, rope, butter, cheese, lard, tobacco, leather, hides, copper, sheet and hoop iron, tin, bar and hollow ware, rice, boxes soap and candles, bagging, and other heavy articles not enumerated below, per 100 lbs., - 45 "
3d class.—Flour, bacon, liquors, pork, beef, fish, tallow and beeswax, per 100 lbs., - 40 "
4th class.—Mill-gearing, pig and bar iron, grind and millstones, nails, spikes and coal, 100 lb. 30 "
Barrels of beets, bread, crackers, potatoes, ice, fruit, oysters, onions, and all light bbls, each, 75 "
Oil and molasses per hhd. (smaller casks in proportion) - \$6 00
Salt per sack not exceeding 4 bushels, - 50 "
Goods consigned to Thos. S. Wayne, Forwarding Agent, Savannah, will be forwarded free of commission. WM. M. WADLEY, Supt.
Savannah, Ga., February 24, 1850.

**ENGINEERS' AND SURVEYORS'
INSTRUMENTS MADE BY
EDMUND DRAPER,
Surviving partner of
STANCLIFFE & DRAPER.**



No 23 Pear street, below Walnut, Philadelphia.

GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES.

AND WESTERN AND ATLANTIC RAILROAD, FROM ATLANTA TO DALTON, 100 MILES.

This Road, in connection with the South Carolina Railroad, and Western and Atlantic Railroad, now forms a continuous line, 408 miles in length, from Charleston to Dalton (Cross Plains) in Murray county, Ga. 32 miles from Chattanooga, Tenn.

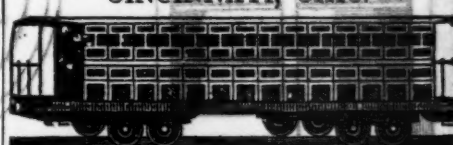
RATES OF FREIGHT.

	Between Augusta and Dalton, 271 miles.	Between Charleston and Dalton, 408 miles.
1st class Boxes of Hats, Bonnets, and Furniture, per cubic foot	\$0 18	\$0 28
2d class Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs, and Confectionary, per 100 lbs.	1 00	1 50
3d class Sugar, Coffee, Liquor, Bagging, Rope, Cotton, Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow ware, Castings, Crockery, etc.	0 60	0 85
4th class Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.	0 40	0 65
Cotton, per 100 lbs.	0 45	0 70
Molasses per hogshead	8 50	13 50
" " barrel	2 50	4 25
Salt per bushel	0 18	
Salt per Liverpool sack	0 65	
Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows, -	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Company will be forwarded free of commissions. Freights payable at Dalton. F. C. ARMS, 44*ly Sup't of Transportation.

**CAR MANUFACTORY
CINCINNATI, OHIO.**



KECK & DAVENPORT would respectfully call the attention of Railroad Companies in the West and South to their establishment at Cincinnati. Their facilities for manufacturing are extensive, and the means of transportation to different points speedy and economical. They are prepared to execute to order, on short notice, Eight-Wheeled Passenger Cars of the most superior description. Open and Covered Freight Cars, Four or Eight-Wheel Crank and Lever Hand Cars, Trucks, Wheels and Axles, and Railroad Work generally. Cincinnati, Ohio, Oct. 2, 1848. 44*

NICOLL'S PATENT SAFETY SWITCH FOR Railroad Turnouts. This invention for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design. It acts independently of the main track rails; being laid down or removed without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two castings and two rails; the latter, even if much worn or used, not objectionable.

Working models of the Safety Switch may be seen at Messrs. Davenport, Bridges & Kirk's Cambridge Port, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained, on application to the Subscriber, Inventor and Patentee. G. A. NICOLLS, Reading, Pa.

FOWLER M. RAY'S METALLIC INDIA RUBBER CAR SPRINGS.

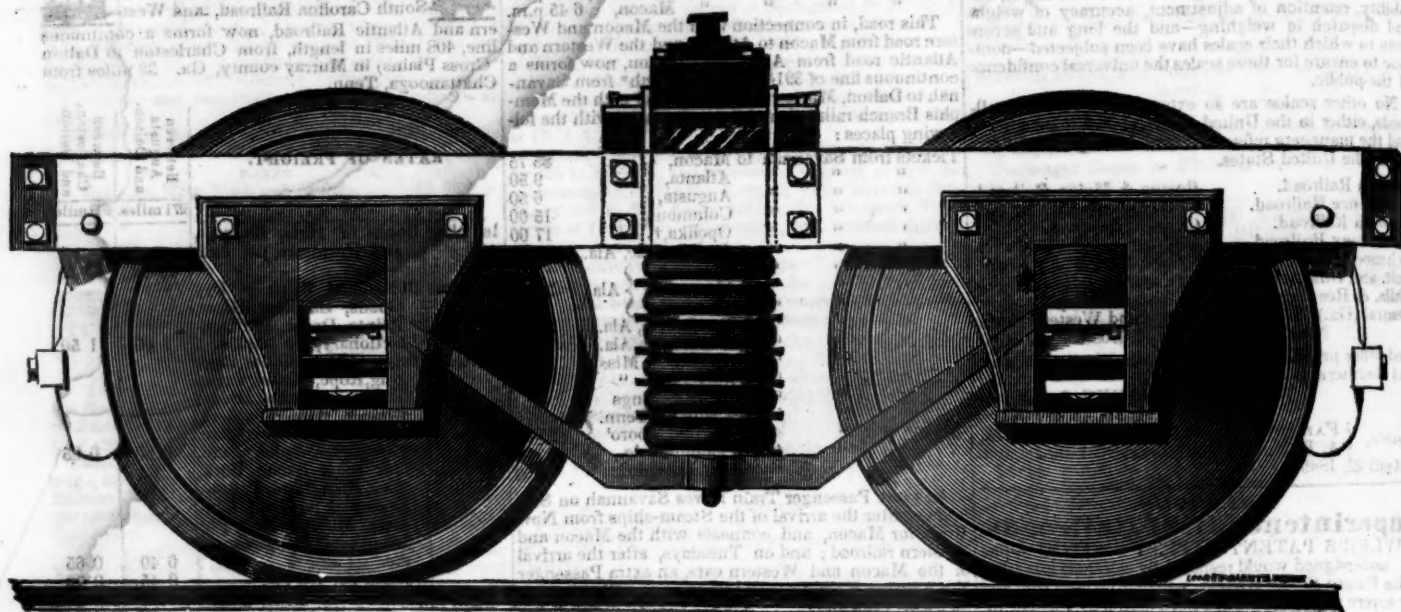


Fig. 1.

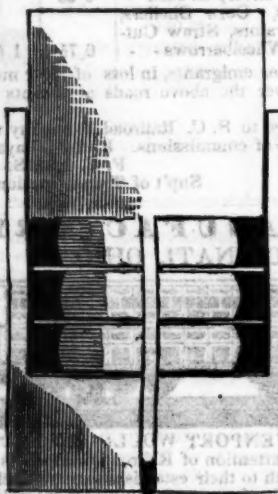


Fig. 2.

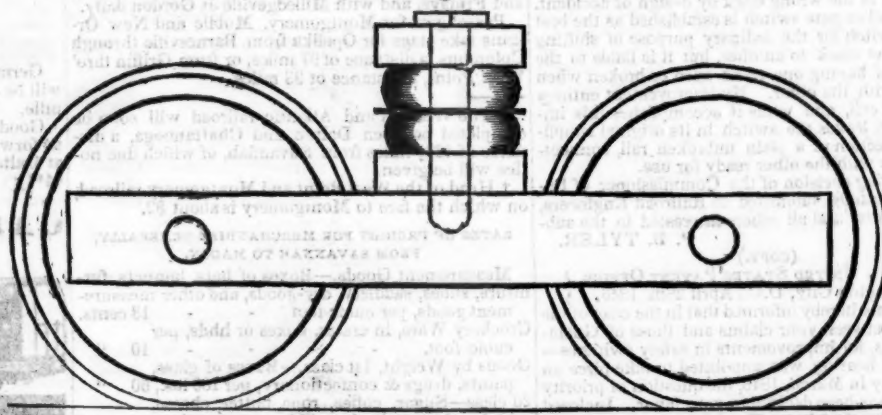


Fig. 3.

So much has been published for the purpose of misleading the public in regard to the inventorship of the India-rubber Railroad Spring, patented in the United States by Mr. W. C. Fuller, that the New England Car Company, proprietors of this invention, have deemed it proper, for the information of Railroad Companies, Car Builders and the public generally, to lay before them the facts upon which they found their claim to this invention, and to a Patent therefor.

Cut No. 1, Represents a cross section of the first model made by Mr. Tucker, under the direction of Mr. Ray, in the summer of 1844, and to which Mr. Tucker, Mr. Bradley and Mr. Bannister testify as being the model marked "B."

Cut No. 2, Represents the model made in 1845, to which Mr. Osgood Bradley and Gen. Thos. W. Harvey have testified.

Cut No. 3, Represents a rough sketch made by Mr. Ray in 1844, which he gave to a man about departing for England to take out some patents, who promised to write to Ray after his arrival in that country—which promise he has probably forgotten.

Mr. W. C. Fuller, of England, patented the above Spring in that country on the 23d October, 1845. He filed his enrollment April 23d, 1846, and on the 22d October, 1846, he took out a patent in the United States under the title, "For Improvement in Railway Carriages," when the improvement consisted in the spring, and not in the carriage.

The reader will perceive by the annexed testimony, that the India-rubber Railroad Car Spring was invented by Mr. Ray about two years previous to the date of Mr. Fuller's enrollment.

The Depositions are omitted for want of room, but will be published in full in the course of a few weeks.

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ROOM 12, THIRD FLOOR,
No. 136 Nassau Street,
NEW YORK.

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LETTERS and COMMUNICATIONS to this Journal may be directed to the Editor,

HENRY V. POOR,
136 NASSAU STREET.